

How the MacBook Air could change everything (again)

Macworld

March 2015

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HomeKit is here

How Apple will win
the smart home by
keeping it simple



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X 10.1**

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navigate
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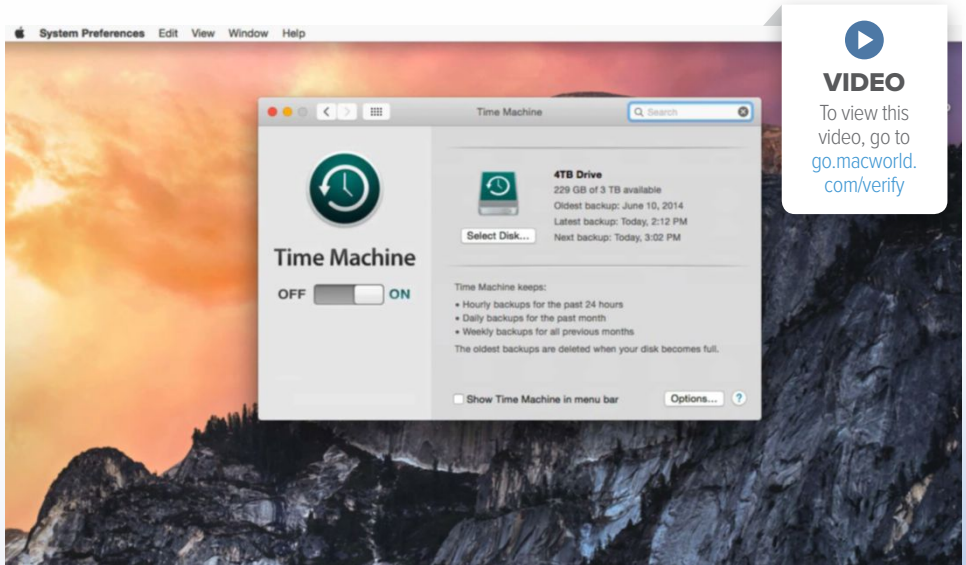
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VIDEO

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video, go to
[go.macworld.
com/verify](http://go.macworld.com/verify)

How to verify and repair a Time Machine backup

You've gone to all the trouble to create a Time Machine backup. Maybe you should make sure it works.

BY CHRISTOPHER BREEN

We recently put out a call for topics you'd like to learn more about and one of the most popular suggestions was how to verify a Time Machine backup. After all, you've gone to all the trouble to create such a backup, it would be nice to know if it works. It turns out that there's not a completely clear-cut answer to this one. Let me explain.

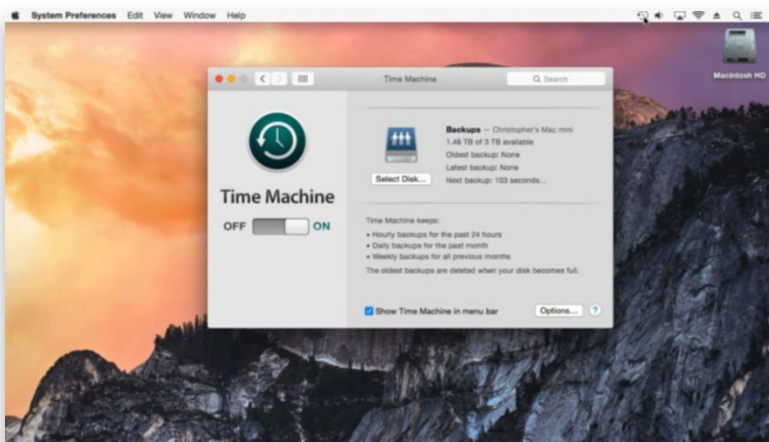
I'll open the Time Machine preference and ensure that the Time Machine menu appears in the menu bar. I'll then hold down the Option key and click on this menu and, look at that, there's a Verify Backups command. But wait, it's grayed out.

It's grayed out because this is a Time Machine backup housed on a drive connected directly to my Mac. This command works only for networked Time Machine backups—either backups on an Apple Time

Capsule, or a networked drive on another Mac or an NAS.

Through the miracle of editing I've switched my Time Machine backup to a drive I have attached to my Mac mini and the command is now active. At this point I can choose to verify the backup.

But many people don't have a network backup device. What are they supposed to do? First, you can do the obvious thing and try restoring a file using Time Machine. If it works, that's a very good sign.



THE VERIFY BACKUPS command works only for networked Time Machine backups—either backups on an Apple Time Capsule, or a networked drive on another Mac or an NAS.

You could then access the contents of your Time Machine backup and see if real files appear. Try copying one. If it works this is another good sign.

If you really want to get down to it, launch Terminal and enter this command: `tmutil compare` and then press Return.

When you do this, `tmutil` will run and compare the contents of the last Time Machine snapshot with the current state of your Mac. Entries with a plus next to them tell you that thing is new. Files with a minus tell you that thing has been removed. And an exclamation mark indicates that a file has changed.

To compare the amount of data that's changed, enter `tmutil compare -s`. If you see zeros after the Added, Removed, and Changed entries, this tells you that the backup is in sync with your Mac and is very likely working as expected.

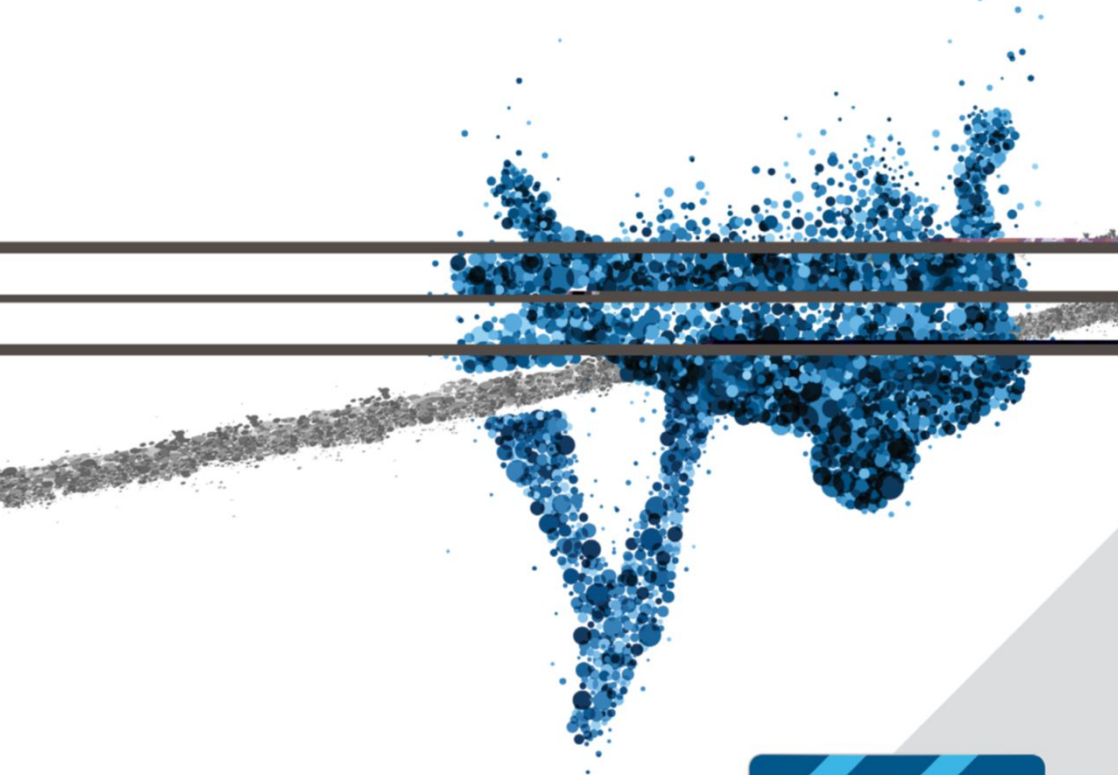
If you suspect that your Time Machine backup is wonky, you can verify it and then try to repair it. To do that, open Time Machine's preferences and switch off Time Machine. Then launch Disk Utility, select the

**IF YOU SUSPECT
THAT YOUR TIME
MACHINE BACKUP
IS WONKY, YOU
CAN VERIFY IT
AND THEN TRY TO
REPAIR IT.**

drive you normally use for your backup, and then click the Verify button, just as you'd do with any other drive you want to check.

Given the uncertainty that surrounds Time Machine verification it makes a whole lot of sense to have more than one backup. While many people create a Time Machine backup and then use another utility to clone their drive, you can create two Time Machine backups easily.

Just go into Time Machine's preference and select an additional disk and choose to use it as a backup. You'll be presented with the option to use both disks. Do so. Now, when Time Machine performs future backups it will back up to the first disk, and on the next go around, back up to the next one. ■



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Unlocking Disk Utility's hidden secrets

Disk Utility has a lot of talents, some less well known than others. We explore some of its more esoteric (though useful) features.

BY TOPHER KESSLER



ne of OS X's most versatile utilities is Disk Utility—a tool not only used for formatting and managing a variety of storage devices, but also employed for fixing damaged volumes and performing the ever-so-common “permissions fix” routine. While these features are relatively apparent, the program does have some often overlooked options that can be useful.

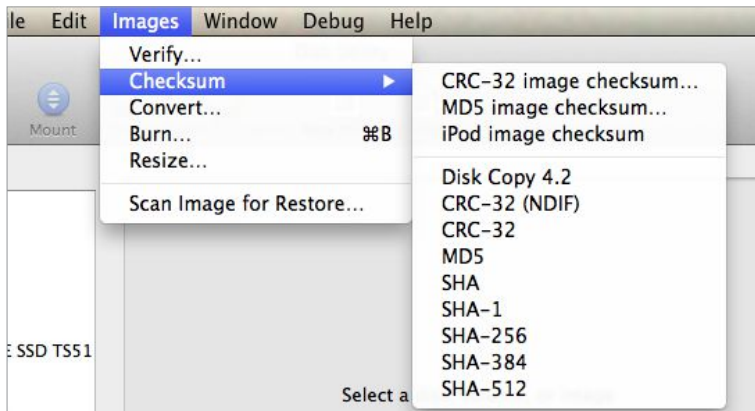
ALTERNATIVE CHECKSUMS

The first of these is the hidden checksumming routines for verifying disk image files. If you have an image, especially an older one, you might wish to verify its integrity before opening it. This is usually done when the image is opened, but you can also do it manually by adding an image to Disk Utility, selecting it, and choosing *Images* → *Checksum* → *CRC-32 image checksum*. This is fine, but often developers (including Apple) will issue updates and other software in disk images and include an SHA or MD5

checksum that you can use to verify the image's integrity before opening it. However, these options are hidden in Disk Utility by default. To enable them, follow these steps:

1. Quit Disk Utility.
2. Open the Terminal utility.
3. Run the following Command:
defaults write com.apple.DiskUtility advanced-image-options 1
4. Relaunch Disk Utility

After performing these steps, the *Images* → *Checksum* menu will have a number of additional options for



USE A TERMINAL
command
to expand
Disk Utility's
checksum
options.

verifying image checksums. Leaving these options exposed does no harm, but if you'd like to restore the menu to its default state, just follow the first two steps above and use this command in step 3:

```
defaults delete com.apple.  
DiskUtility advanced-image-  
options
```

QUICKLY CREATE DISK IMAGES FROM FOLDERS

One useful feature of Disk Utility is its ability to create a disk image from the contents of a folder, where, like compressing the folder into a zip archive, you can use the resulting image to easily transfer the items to an online disk or other location that doesn't accept folders. The benefits of this are that you can not only use disk image compression to help save space, but can also take advantage of Apple's robust AES-128 or AES-256 encryption for the disk image.

While you can access this feature using the *File → New → Disk Image from Folder* command, a quicker way is to simply drag your desired folder to the Disk Utility icon, which can be even more convenient if you have Disk Utility in your Dock. When you do this, a save dialogue box will appear that allows you to save the folder as an image immediately. Within this dialog box you can additionally configure compression and encryption settings.

ONE USEFUL FEATURE OF DISK UTILITY IS ITS ABILITY TO CREATE A DISK IMAGE FROM THE CONTENTS OF A FOLDER, WHERE, LIKE COMPRESSING THE FOLDER INTO A ZIP ARCHIVE...

MANAGE HIDDEN VOLUMES ON YOUR MAC

While Disk Utility will allow you to partition, repair, erase, and manage drives that you've attached and mounted on your Mac, it can also show those that are attached but currently not mounted. This can be useful for checking that a drive is connected and "seen" by your Mac, determining how it's partitioned, and ensuring there aren't obvious problems with the drive (for instance, you thought it had only one partition but two or more appear). You can additionally force-mount some volumes that are configured to remain hidden and then access their contents in the Finder.

To enable this feature you must expose Disk Utility's Debug menu, which Apple uses for testing the app's features during development. Here's how:

1. Quit Disk Utility
2. Open the Terminal utility
3. Run the following Command:

```
defaults write com.apple.  
DiskUtility DUDebugMenuEnabled 1
```

4. Relaunch Disk Utility

With this menu enabled, choose the

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Thunder2 Quad Mini

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AKiTiO Thunder2 Dock

Thunderbolt™ 2
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Thunder2 Storage-AV

USB 3.0
Thunderbolt™
AKiTiO ThunderGo

Thunderbolt™ 2
AKiTiO
Thunder2 Duo Pro

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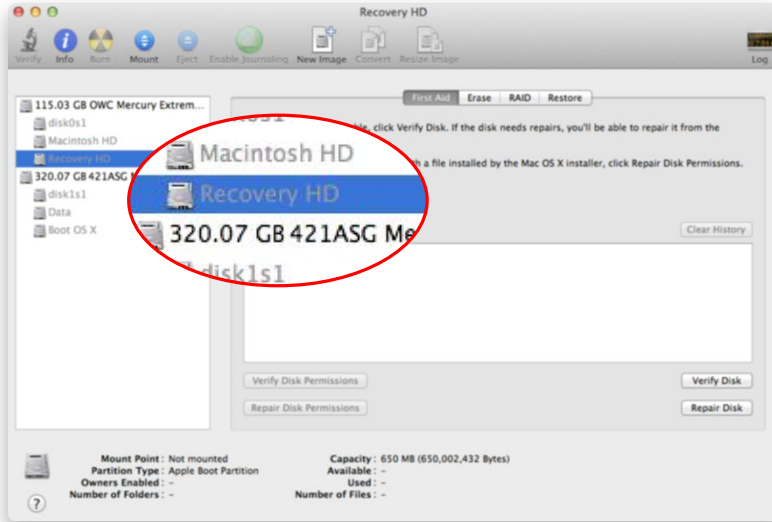
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**EXPOSE THE**

Debug menu to view all partitions a drive holds.

Show every partition command near the bottom and any hidden partitions will appear. You'll see, for example, an EFI partition appear on bootable drives and a Recovery HD partition for those drives that hold one. To undo this option, first deselect the *Show every partition* command, repeat the procedure above, and then run the following command in step 3:

```
defaults delete com.apple.DiskUtility DUDebugMenuEnabled
```

VERIFY AND REPAIR MULTIPLE ITEMS AT ONCE

This last tip is a matter of quick convenience, particularly if you regularly check drives for errors. To verify a drive you'd normally ensure that Disk Utility's

First Aid tab was selected, choose an individual drive, and click the Verify Disk button in the bottom-right of the window. You'd then move on to another disk and repeat these steps. However, to speed things up you can verify more than one drive at a time, including all drives at once, if you wish.

To do this, simply hold down the Command key and, in the sidebar, select the volumes and disks that you want to verify (or press Command-A to select them all). Note that Select All means exactly what it says; you'll select mounted disk images and optical disks along with your drives, so be sure to deselect any you don't want to check by Command-clicking on them. With the desired devices selected you can then click Verify Disk. Disk Utility will then act on them in sequence. ■



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What to do if your Mac refuses to accept your password

We offer tips for dealing with a Mac that won't accept a password.

BY TOPHER KESSLER





LOG INTO your administrator account to change another account's password.

Even though you can set up your Mac to automatically log into your user account without a password, your computer is going to be more secure if you use one. Of course, there's a slight danger that a day will come when that password doesn't work—you've modified your Mac in some way that's password-unfriendly or you've been negligent. Or you may simply forget what your password is, which can happen if you use a standard user account for daily tasks and haven't touched the administrators account in awhile.

Fortunately, if you have lost your password, there are several approaches you can take for either regaining complete access to your Mac or, at least, getting to the specific data you need. Here are some tips for doing just that.

Resetting your Password Apple includes several options for resetting account passwords in OS X. The approaches I outline below depend on how much access to your Mac you currently have.

Change it from an admin account

To maximize your Mac's security you should have both an administrator account for administrative tasks and a standard account that you use for your primary identity (you can still perform administrative tasks from within your main account by authenticating with the administrator credentials). If you configure your Mac this way you can then log into the admin account and use the Users & Groups system preferences to change your main account's password.

To do this, click the lock icon in the Users & Groups system preferences to authenticate, and then click the account you can't log into. In the account's settings, click the Reset Password button to change the account's password.

Use Single-User mode Every Mac has a main user account called "root," which is the system account that's used to launch the essential background services required for your Mac to operate. While this account is generally hidden and inaccessible, you can quickly get to it for its administrative capabilities by booting your Mac into single-user mode.

To proceed you'll need to know the short name of the account for which you would like to reset the password, and then perform the following steps:

- Restart your Mac and hold down Command-S at the boot chimes.
- When you see the command prompt, enter the following command to put the boot drive into read and write mode: `mount -uw /`
- Now run the following command to



ENTER AN INCORRECT password three times and you'll be prompted for an Apple ID.

load Open Directory (Apple's account directory service in OS X):

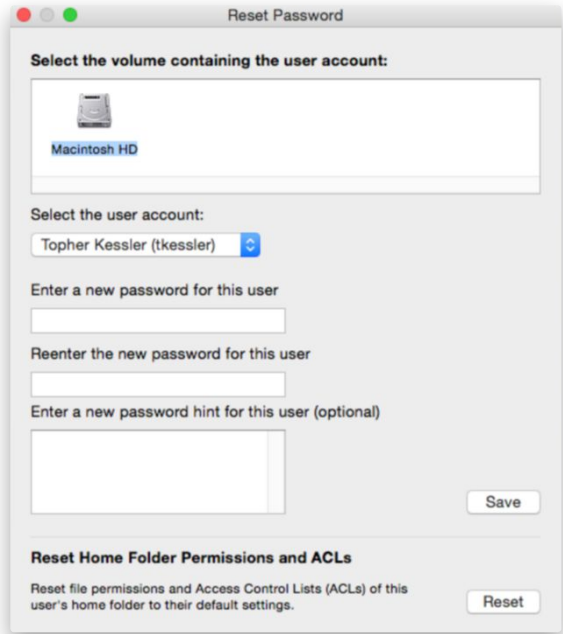
```
launchctl load /System/Library/LaunchDaemons/com.apple.opendirectoryd.plist
```

- Reset the password for your user account by entering the following command (replace “username” with the short name of the desired account) `passwd username`

Use an Apple ID In OS X you can bind your user account to your Apple ID and then use it to reset your OS X password if you've lost it. This feature first requires that you've associated your Apple ID, which can be done by going to the Users & Groups system preferences, and then clicking the Set button next to the words Apple ID and then supplying your Apple ID and password. You can then enable the option to allow resetting your password using an Apple ID. (If you instead see a Change button next to the Apple ID entry, your ID is already associated.)

With this set up, you can reset your password by entering the incorrect password three times on the login screen, which will invoke a panel that prompts you to reset the account's password using your Apple ID. Follow the on-screen instructions and you should be able to change your password and then log into your account.

Note that of the options I present here, this one should preserve the link to your keychain, allowing you to continue working seamlessly with



your new password, without having to store other passwords in your keychain again.

Use Recovery Mode A final option for resetting your password is to use Apple's recovery tools. This will perhaps be the easiest approach in most cases, and can be done with the following procedure:

1. Reboot into Recovery mode or Internet Recovery by holding Command-R at startup.
2. Choose *Terminal* in the Utilities menu.
3. Enter `resetpassword` (all one word, and lowercase) in the Terminal window and press Return.

SELECT YOUR
boot drive in
the utility that
appears in the
Reset Password
window.

4. Select your boot drive in the utility that appears.

5. Choose your user account from the pop-up menu.

6. Click the button to reset the account's password and supply a new one when prompted.

If you use FileVault encryption with your Mac, the password reset utility will not show your boot drive until you first unlock it with Disk Utility. To do this, open Disk Utility where you will see your drive grayed out in the list of devices. Select it and click the Unlock toolbar button and then, after supplying your password to unlock the drive, you can select your disk in the password reset utility.

RECOVERING YOUR DATA

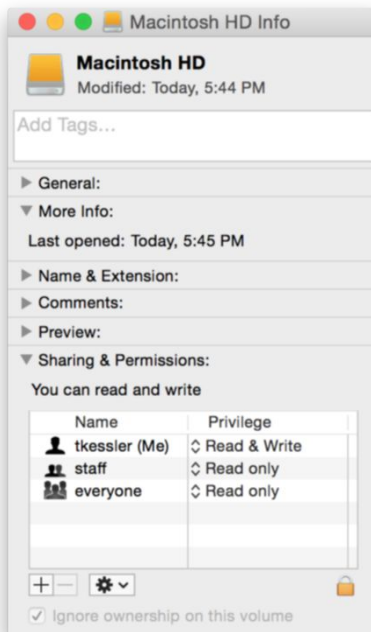
The options I've mentioned will help you reset your password and log into your account. However, if you still can't get into your Mac because of a lost or forgotten password there's a way to get some of the data off of it. That way is Target Disk mode.

Target Disk mode lets you access your Mac's hard drive as an external drive, provided that you don't have FileVault enabled or a firmware password set on your Mac. If you do have FileVault enabled and can't remember either your password for unlocking the drive or the drive's recovery key, then you won't be able to recover any data from it. In this case your best bet is to retrieve your

data from a backup.

To use Target Disk mode, restart the Mac you wish to access and hold the "T" key when you hear the boot chimes. Connect this Mac to another one via either a FireWire or Thunderbolt cable and its hard drive should appear as an external drive to your second Mac. From here you can manually copy data from the drive or use Apple's Migration Assistant or Setup Assistant tools to transfer your data.

While you should be able to browse all files on the drive in Target Disk mode, there may be some times when you can't do this, either because of permissions restrictions or because



USE THE Info window to ignore ownership on the connected drive.

files are hidden. To overcome this, you can select the drive mounted via Target Disk mode, press Command-I to produce the drive's Info window, and enable the option to ignore ownership on the volume (at the bottom of the information window). To manage hidden files, you can temporarily show all files in your current Mac's Finder by running the following command in the OS X Terminal app:

```
defaults write com.apple.  
finder AppleShowAllFiles  
-bool TRUE; killall Finder
```

When you're finished accessing

these files, hide your files again by using this Terminal command:

```
defaults delete com.apple.  
finder AppleShowAllFiles;  
killall Finder
```

A SAFE HAVEN

Much as recovering or resetting a forgotten password may sound like a bother, it's a small inconvenience that's entirely trumped by a Mac protected with a solid password. Ideally you'll never need to turn to these techniques. But should the bad thing happen, it's nice to know you have so many fallbacks. ■

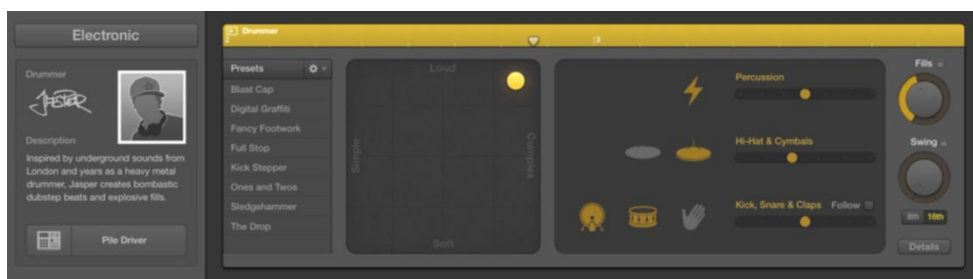


First look: Logic Pro X 10.1 brings it to beatmakers

Apple has released a major update to Logic Pro X that focuses on electronic music. Chris Breen has a first look.

BY CHRISTOPHER BREEN

Tune into just about any Top 40 radio station these days and it becomes evident that a producer has as much (or more) to do with a song's arrangement and presentation as the recording artist. While this has long been the case with hip-hop and electronic tracks, even the music performed by such mainstream artists as Taylor Swift would have far less impact without the ministrations of the behind-the-scenes producer.



This trend has not escaped Apple's notice as evidenced by January's release of Logic Pro X 10.1. Although the free update includes a vast number of improvements and fixes, its target is clearly the producer and, more specifically, those working with elements of electronic music (which, again, is just about any of today's popular artists and producers). Here are some of the highlights of the latest version.

GIVE THE (ELECTRONIC) DRUMMER SOME

One of the key new features of the last release of Logic Pro X ([go. macworld.com/prox](http://go.macworld.com/prox)) was the Drummer track. This track intelligently generates convincing acoustic drum

tracks using a variety of sounds recorded by real drummers. By adjusting the puck on an XY pad you can change the loudness as well as the complexity of this track. You can additionally ask the drummer to add more fills, swing a bit more, and add or subtract portions of his or her kit.

With version 10.1, Apple has added 10 new drummers—or, more accurately, beat programmers. Rather than being equipped with acoustic drums, each drummer plays a drum machine. Like the “real” drummers before them, e-drummers have their own kits, though these are comprised of sounds from a wide variety of drum machines—with sounds ranging from the classic to the

AS WITH PREVIOUS Drummer tracks, you can control an electronic drummer's performance.



THE CONTROLS

you see in Drum Machine Designer interface depend on the drum you've chosen.

contemporary (as well as entirely unique sounds). As with the acoustic players, you can direct your e-drummer to play more simply or with greater complexity via the position of the XY pad's puck, fill less or more often, swing (or not), and add instrumental elements to his or her kit. Each drummer comes equipped with eight preset patterns, but you can create and save your own. Within the track's Smart Controls area you can choose from among a handful of patterns for each instrumental group (kick, snare, and claps; hi-hat and cymbals; and percussion, for example). You can also choose one of a couple of different styles for each.

If you'd like greater control over the kit, you have it in the form of the new

Drum Machine Designer plug-in.

Within this plug-in you can not only change the mix of the various drums and alter their tone in the Effects section, but also tweak each individual drum sound, adjusting such elements as pitch, length, envelope, distortion, body, presence, pan, and volume. (The controls you see depend on the kind of drum you've chosen.) And if you'd like to swap in an entirely different sound for a particular drum, just open Logic Pro's sound library and, from the Kit Pieces category, choose the kind of drum you're after (a kick drum, for example) and then select one of the available sounds.

KICKIN' IT

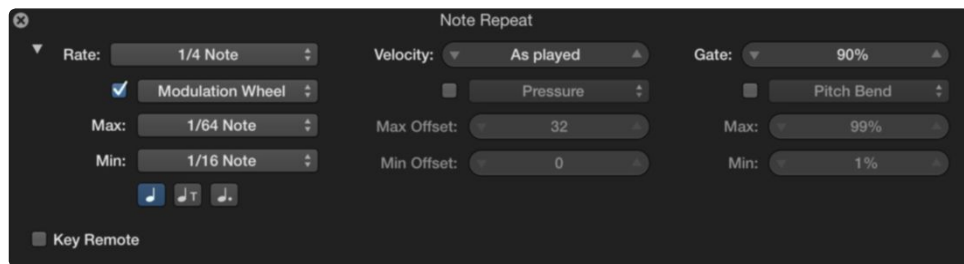
It's possible that there are people who

enjoy creating drum machine parts by clicking individual notes into place on a timeline or banging them out on a MIDI keyboard, but I'm not one of them. For those like me, Logic offers new Note Repeat and Spot Erase features for more easily creating drum and software instrument parts.

The idea is simple (and familiar, if you've used classic drum machines).

in real time with a MIDI controller—a slider or wheel, for example. For instance, assign it to your controller's modulation wheel and wheel up as you record to increase the frequency that the beats are played (from eighth notes to 64ths, for example).

Spot Erase is the other side of this coin. If you'd like to remove parts from a currently playing software



Select a software instrument track or drum track, expose the toolbar, and click on the Note Repeat icon. Choose a repeat rate such as a quarter note, start recording, and press C1 on your keyboard. As long as your finger holds down the C1 key, the kick drum will be recorded for each quarter note beat. Repeat the process for other notes and sounds—press F#1 to trigger the hi-hat and assign a value of an eighth note, for example. (You can also use this feature with the updated version of the free Logic Remote iPad app and with Logic's onscreen keyboard.)

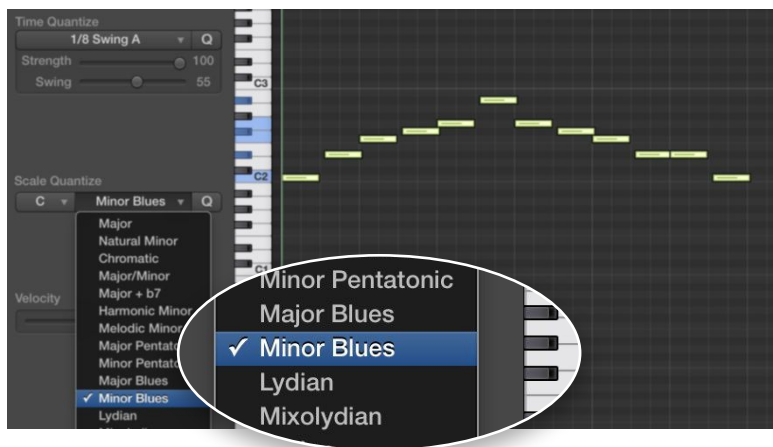
But there's more to it. You can additionally adjust the rhythmic value

instrument or drum track, enable Spot Erase and then hold down the key that triggers a particular note or sound as it plays. You might, for example, find the constant eighth note click of a hi-hat track to be too static. To put holes in that track, hold down F#1 for those notes you'd like to remove as the track plays.

MIND OVER MIDI

In line with expanding Logic's drum palette, Apple's Logic team has enhanced the MIDI tools producers and artists will use to input and edit their electronic drum parts. This takes place in Logic's Piano Roll (read: MIDI) editor.

IT'S EASY TO
create beat
patterns with
the Note Repeat
feature.

**USE THE NEW**

Brush tool to paint in patterns of notes.

The editor has been expanded in a variety of ways. First, the names of electronic drums now appear in the editor rather than simply as note names (C1, D2, and so on) or piano keys. This makes it easier to find exactly the sound you'd like to edit. There's also a new Collapse Mode, which, rather than displaying every note value across the spectrum, shows you only those notes that have data assigned to them—C1 for the kick drum and D1 for the snare, for example, but not G1 and A1 if no notes appear on those lines. If you've ever spent time scrolling up and down through a tall MIDI track to find just the note values you want, you'll appreciate this feature.

The editor now includes a Brush tool that, when selected, lets you "paint" in notes much like you'd splatter drops of paint on a canvas.

This could easily result in chaos except for the tool's ability to constrain notes by scale. You can, for example, brush in just those notes that make up a C minor blues scale. You can then select a group of notes, define them as a brush pattern, and then brush in that same pattern elsewhere. This can be an easy way to create rudimentary harmonies when brushing over a group you've already created—say by starting the second brushed pattern from a note a third above the original. Then just edit out or adjust the pitches that don't harmonize well.

MAKING IT MELLO(TRON)

The latest Logic isn't entirely about drums and beats. For those from the Old School (or who simply want to emulate it) there are the new Mello-tron instruments. Popular in the late

'60s and early '70s (Paul McCartney opened "Strawberry Fields Forever" with a Mellotron part), this was a keyboard instrument that played short tape loops of flutes, strings, brass instruments, and voices. It's a distinctive (and, for some of us, familiar) sound that's now part of Logic Pro X. With this instrument you can blend two different Mellotron sounds—Boys Choir and Flute, for example.

There are over 200 new synth instrument sounds in this release as well. Many of them use MIDI plug-ins and track stacks to create rich (and sometimes rhythmic) sounds. You'll find them largely within the Synthesizer and Arpeggiator groups.

BUCKET LIST

And then there are the "I wish it did..." features that not every musician or producer absolutely requires, but make for less tedious work. For example, there's region-based automation. You've always been able to automate an entire track—record a

track's volume change over time or record the motion of a modulation wheel to increase the speed of a Leslie effect to an organ part, for example. But you can now embed automation into individual regions within a track. If you move that region to a different part of your track, the embedded automation moves with it. And you can do this for multiple regions throughout a track. This doesn't preclude you from also adding automation to the entire track, as that feature remains.

Logic Pro also includes a new Time Handles feature that affects MIDI notes. With it you can select a group of notes in the Piano Roll editor and expand or compress them to take up more or less time, respectively. You might, for example, have a percussion pattern that takes up one measure. On second thought you decide that you'd like it to run at half that speed for two measures. Rather than rerecord it, you can instead switch on Time Handles, select the notes within



FINALLY, THANKS to the Mellotron instrument, you can start that early-King Crimson cover band.

the pattern, and then drag a handle that appears on the right border of the selection to drag it to the end of the next measure. The pattern expands and slows to half its original speed, but the relative rhythmic relationship between the notes doesn't change. The second note will still be half the duration of the first, for example.

While it's not something that everyone will care about, I'm personally pleased to see the new Smart Quantize feature. I'm a keyboard player and I occasionally add a flourish of notes as I play. But, like just about every other musician on earth, I sometimes like to correct my timing by quantizing a part (which forces notes to a rhythmic grid so they play more in time). The problem is, if you quantize to something like a 16th note grid, 128th note flourishes are turned into unmusical blocks of notes. MIDI drummers can have the same problem with rolls and paradiddles. With Smart Quantize switched on, Logic recognizes these note-rich passages and improves their timing while maintaining the intended roll or other flourish. Also, the length of notes in-between quantized notes are compressed and expanded proportionally to retain the relative legato of the phrase. In short: quantization that feels human.

And so much more: the ability to have more than one drummer track in

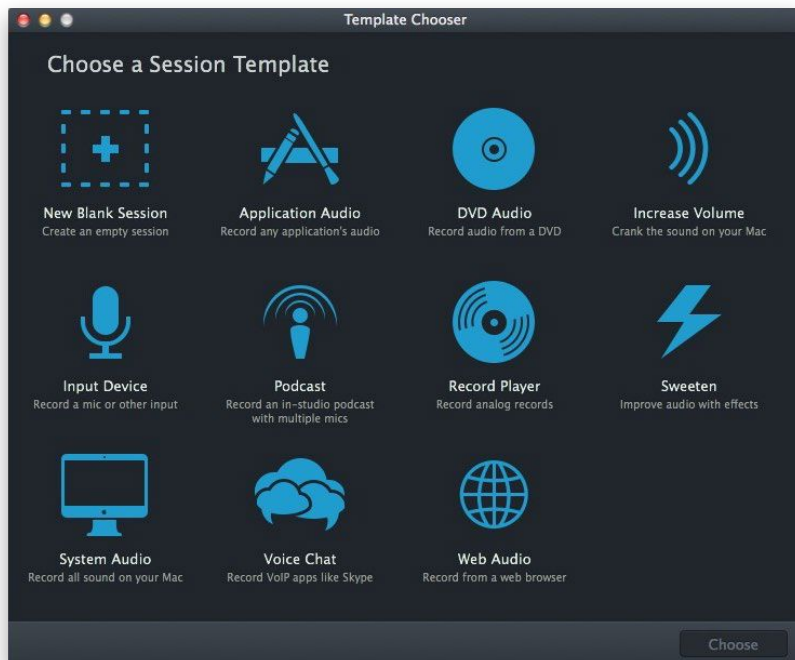
THE LOGIC PRO X 10.1 UPDATE WEIGHS IN AT AROUND 1.1GB AND IS COMPLETELY FREE FOR EXISTING USERS.

a project, realtime fade rendering, a redesigned compressor plug-in with Retina-ready interface, the ability to create custom plug-in menus, Command-click to un-mute or un-solo all channels, and improved stability.

A WORTHY UPGRADE

The Logic Pro X 10.1 update weighs in at around 1.1GB and is completely free for existing users. If you create electronic music, this is a must-have update. And even if you're a musician or producer less interested in electronic enhancements, it's worth it for the many improvements and fixes that aren't marquee features of this release.

GarageBand users who are starting to feel a little restricted with the tools that app provides will find this as good a time as any to drop the \$199 necessary to own a copy of Logic Pro X. Thanks to the similar interface between the two apps (and the ability to hide advanced features so you don't feel overwhelmed) you'll feel right at home in no time. And if you're entirely new to Logic Pro, you'd be hard-pressed to find a better bargain among existing professional digital audio workstation apps. ■



AUDIO

AUDIO HIJACK 3'S UPDATED INTERFACE MAKES CAPTURING AUDIO A BREEZE

BY CHRISTOPHER BREEN

ROGUE AMOEBA'S AUDIO HIJACK PRO has been a longtime favorite of many who wish to capture sound routed through their Mac—whether from apps or audio input devices. Inventive and powerful though the app was, however, its interface could be challenging to the uninitiated. With the release of Audio Hijack 3, the company has taken a large stride forward in making the app both capable and easy to use.

JUMPING IN

If you were a person not accustomed to capturing audio you could be forgiven for launching previous versions of Audio Hijack and thinking “Now what do I do?” The app offered a lot of power under the hood, but the way forward wasn’t always clear. This should no longer be a problem as Audio Hijack 3 includes a template chooser. Just create a new session and you can choose the kind of task you’d like to perform—pull audio from an application, record audio from a DVD, jack your Mac’s audio beyond its normal limits, record from an input device such as a microphone or audio interface, create a podcast, digitize an LP, improve existing audio, capture your Mac’s audio, record VOIP conversations, or grab audio from a web browser. Just select the task you’d like and click Choose.

When you do this, a session window appear, populated with the blocks necessary for the task you’ve chosen. In many cases you need do no more work than click the Record button that appears at the bottom left of the window and initiate any audio that you’d like to capture.

While this template chooser will be helpful in a lot of cases, there will be times that you’ll prefer to create workflows of your own. That too is far easier than it once was.

IT’S ABOUT THE WORKFLOW

If you’ve ever worked in an easy-does-it graphical programming environment (Lego Mindstorm or Automator, for example) you see the wisdom of Audio Hijack 3’s session window environment. Along the right side of the main window are Sources, Outputs, and Built-in Effects libraries. (There are also headings for Audio Unit Effects and Meters, which are collapsed by default.) To the left, the work area. To configure a session you simply drag in the elements from the libraries to make up your workflow. Those that should be connected—an input to an output, for example—do so automatically.

Let’s say that you want to record the audio coming from your Mac’s built in mic. To do that you’d drag in the Input Device element, where it appears as a block in the work area. To complete the workflow you drag in a Recorder block from the Outputs area. A faint path will appear between the two blocks, indicating that they’re connected. Now click the Record button at the bottom of the window to start your recording. The Record button turns red, an active meter appears to the right, and the path between blocks lights up and animates the signal moving from left to right. Recording audio

AUDIO HIJACK 3



AT A GLANCE:

Audio Hijack has long been a capable tool for capturing audio. The latest version’s easy-does-it interface and greater flexibility will appeal to a wide variety of audio users (podcasters included).

PROS:

- Template chooser makes it easy to start tasks
- Intuitive interface
- Can save block options as presets
- Flexible recording options

CONS:

- No ability to stop recordings based on silence

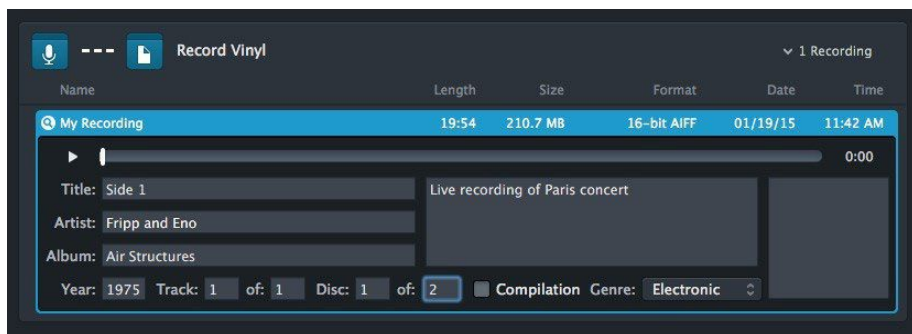
PRICE:

\$49

COMPANY:

rogueamoeba.com





from an app is just as easy. Drag in an Application block, choose the app you want to record from, and add a Recorder block.

To stop your recording, click the Record button again. To hear the results of your work, click the Recordings button at the bottom-right of the window, select your recording, and click its Play button. (You can also tag recordings within this area.) There's no need to save your recording as it's done on the fly.

YOU CAN TAG your recordings as you listen to them play.

IT'S ABOUT THE FLEXIBILITY

As with previous versions, Audio Hijack 3 lets you manipulate audio before it's recorded. For example, you've hung on to your vinyl collection and you'd like to digitize it. You're aware that records occasionally pop and click and you'd prefer to have those sounds filtered out. You can do that by inserting a Declick effect between the Source and Output block. Or you have a microphone that records only on the left channel and you'd like it to be mono across both the left and right channels. Just insert a Channels effect after the Input Device block and choose its Mono option.

And you're not limited to one source and one destination per session. If you're recording a podcast with a multi-channel interface, for example, you can direct each channel to record to a separate file, which you can then mix in an audio editing app. Or you could record each channel (or multiple recording devices) to a single track, mixed together.

And speaking of podcasts, there's Skype and its integration. You could incorporate Skype into previous versions of Audio Hijack, but doing so was confusing. It's now much easier. Just drag in an Application block, configure it to record from Skype, drag in one or more Input

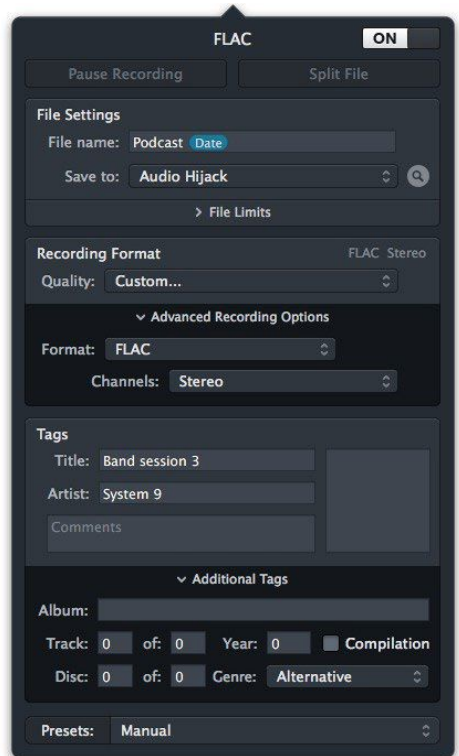
Device blocks to record local audio sources, and have them all connect to a single Recorder block (and drag in an Output Device block to monitor the whole thing through your headphones).

THE BLOCK OPTIONS

If you're following along at home with the trial version you'll notice that when clicking on a block, that block's options are revealed. Each block can be turned on or off, which is helpful when you want to compare a sound with or without an inserted effect or you want to monitor the audio playing in an app but would like the freedom to easily switch off monitoring.

This On/Off switch is also key to monitoring what your workflow will actually record before you commit to the recording. Turning off the Recorder block acts as a kind of record-enable switch. When you switch this block off and click the Record button (which now turns white) you'll hear the results of your workflow but not record it. This allows you to make adjustments to your blocks (as they can be adjusted, added, and subtracted as you're monitoring or recording) before recording for real.

Apart from the On/Off switch you find other options here. For example, suppose you have more than one microphone—your Mac's mic and an attached USB mic. To choose the mic you'd like to use, you'd click on the Input Device block and select your preferred mic from the Audio Device pop-up menu. Similarly, you can choose the output format for your recording—MP3, AAC, Apple Lossless, AIFF, WAV, and FLAC are available—by clicking on the Recorder block and selecting the setting from the Quality pop-up menu. You can also name and tag your recording in this expanded view. If you've added an Audio Unit effect, clicking on the block reveals its controls (you can choose to see its generic or custom interface). And you needn't start from scratch with many block options. Many of them allow you to save your settings as presets, which you can then call up in other sessions.



CLICK BLOCKS
to expose their
options.

Not all block options are tucked away, however. The Recorder block displays two buttons that you can access without exposing the blocks options—Pause and Split. You might use the former to pause a

long dictation session when your phone rings and the latter to separate tracks when digitizing an old LP.

THE RECORDER BLOCK DISPLAYS TWO BUTTONS THAT YOU CAN ACCESS WITHOUT EXPOSING THE BLOCKS OPTIONS—PAUSE AND SPLIT.

STAYING ON SCHEDULE

Also like the previous version of Audio Hijack, version 3 has a scheduling component. Just click the Schedule button at the bottom-right of the window and a Schedule window appear where you can request that Audio Hijack initiate a session at a particular date and time. You might use this feature to record an Internet radio broadcast at the same time each week.

Along similar lines, what's missing is a feature that tells Audio Hijack to stop or split a recording after a configurable period of silence. It's not something that podcasters would find helpful, but if you're digitizing streaming audio or old LPs and tapes, it saves you from sitting in front of your computer and clicking Pause and Split buttons as you record. Rogue Amoeba would likely direct you to its Fission (rogueamoeba.com/fission) editor for this kind of "silence splitting" after the fact, but still, having the ability to record without babysitting your Mac would be welcome.

THE BOTTOM LINE

While Audio Hijack 3 certainly allows you to do some things you couldn't do before, much of the release is about making existing features easier to use—to the point where you get more (and better) audio work done. It's no mean feat to rethink an interface so that an app takes on a new life. Rogue Amoeba has admirably done so with this release of Audio Hijack 3. If you're a current user of any version you can upgrade for \$25. And you should. If you've stayed away because of its challenging interface, it's time to give it another look. ■



PHOTOGRAPHY SOFTWARE

MYLIO KEEPS YOUR PHOTOS ORGANIZED, SYNCED AND BACKED UP

BY LESA SNIDER

IT'S EASY TO CAPTURE digital memories, but managing all those photos and videos is a galactic drag (after all, there's no fun in workflow). Unless you're a pro photographer, it's hard to force yourself into good habits around renaming, keywording, organizational, and most importantly backup. If you don't, you can lose a lifetime of memories, plus it's impossible to find specific photos because they're stored across various computers, iOS devices, external hard drives, bras (kidding!), and social media sites. Heck, you've taken a slew of photos you've not yet seen.

Enter Mylio, a database-driven, nondestructive editing and syncing app launched in October 2014. It's designed for anyone who takes pictures (hobbyists and pros), managing all your photos—iPhone, Facebook, point-and-shoot, DSLR, whatever—in one place, side by side. Mylio also

syncs your photos among the desktop, iOS, removable, and remote devices you tell it about, so your entire collection is always backed up and accessible in multiple places. You can edit, share, and export photos using Mylio, too. Sound too good to be true? Let's find out!

IMPORTING AND SYNCING

Once Mylio is installed on your Mac, you can import photos from your hard drives, CDs or DVDs, iOS devices, Adobe Photoshop Lightroom, Facebook (including photos taken by others that you're tagged in), your Instagram album on Facebook, Flickr, and iPhoto (full Instagram support is forthcoming). Importing photos from folders on your hard drive is fast and you can choose to add, copy, or move them; adding photos doesn't duplicate them and keeps your existing hierarchical structure intact (choosing copy or move places them in Mylio's own directory).

In my testing, importing from iPhoto takes longer. It took a couple of hours to copy 26,000-plus photos, and my Mac crashed due to memory depletion, though after restarting and launching Mylio, the import picked back up and finished without a hitch.

Importing from Lightroom takes a little forethought. If your Lightroom

MYLIO



AT A GLANCE:

Manage all your photos and videos in one program, easily accessible on all your devices with Mylio.

PROS:

- Automated syncing between local and remote devices
- Can display photos visually on a calendar
- Nondestructive editing

CONS:

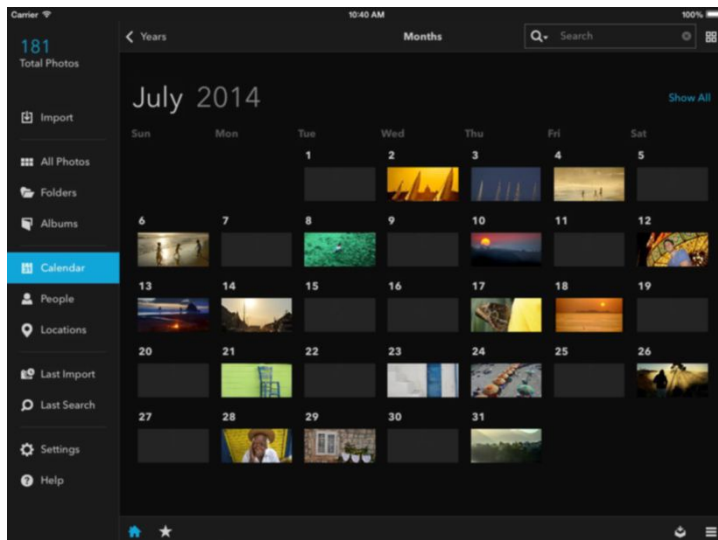
- No selective (localized) editing tools, presets, or project creation

PRICE:

free trial tier, \$50/year Basic, \$100/year Standard, \$250/year Advanced

COMPANY:

mylio.com



MYLIO'S IPAD APP calendar view is a great way to find photos in your collection.

catalog lives in a parent folder containing subfolders of photos, it's best to use the "Add folder" function instead of "Import from Lightroom." That way, Mylio references the same location that Lightroom uses, enabling you to pass images to and fro. Once you use the "Add folder" function, or import from an iOS device's Camera Roll, that folder becomes a "watch" folder; add more photos to the folder and they're automatically imported into Mylio, which is huge for both pros and hobbyists (imagine having an export preset in Lightroom that sends processed images to a watch folder, or dragging email attachments into a watch folder on your desktop).

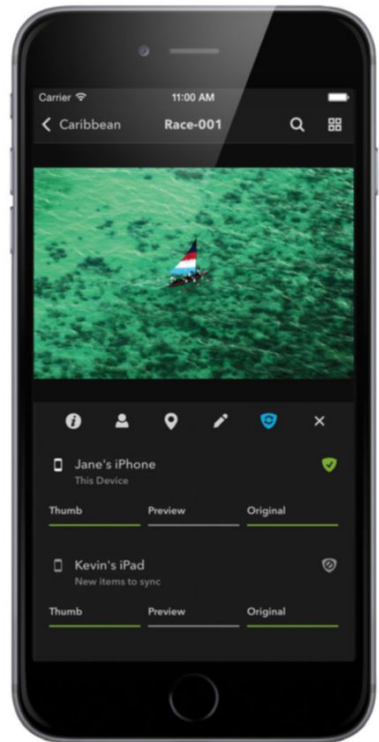
Syncing photos to other devices, local or remote, is fairly easy, too, though a fast wireless network is best. If it's an iOS device, download the app and sign into your Mylio account, then sync your Camera Roll and the watch the photos you imported into Mylio on your Mac immediately begin to appear on the device (slick!). You can also sync to local or remote computers and external drives.

Happily, you pick exactly what is synced on each device—thumbnails, previews, or the originals. For example, you may sync thumbnails or previews to iOS devices and originals to computers and external hard drives (if you shoot in raw format and choose to sync originals to an iOS device, a lower resolution raw file is sent by default though you can change that). You can also limit syncing to a subset of photos, say, only those that are 5-star rated, color-coded or that have certain keywords.

PROTECTION STATUS AND IMAGE STORAGE

Three shields at upper right of the interface show protection status: the first shield indicates that you have the originals on the device you're currently using. The second shield indicates that you have the originals on another local copy, and the third shield indicates that you have the originals on a remote device at an offsite location of your designation (perhaps an external drive kept elsewhere that you periodically plug in).

While Mylio includes cloud storage, it's only used for remote syncing (think "transfer highway"), which is incredibly handy when traveling or



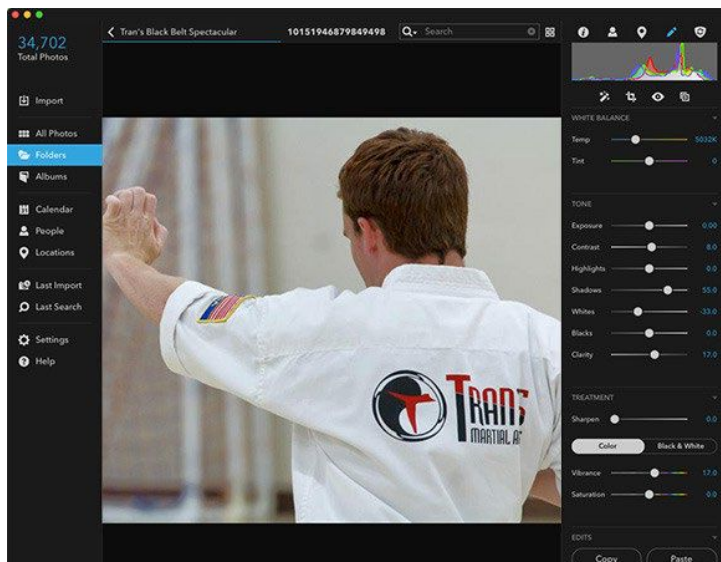
MYLIO GIVES YOU total control over what photos—in what sizes—sync to which devices.

shooting on location (imagine syncing a subset of photos onto an assistant's remote device!).

ORGANIZING, EDITING, AND SHARING

Mylio lets you arrange photos into albums, lightboxes, tag them with people and location info (think facial recognition and geotagging), apply a flag, 5-star rating system, and color-coded labels—all of which you can use to find photos later on. A handy Auto-Advance switch lets you move to the next photo once you tag or rate the current one. Built atop a gaming GPU, browsing thousands of photos in Mylio is smoking fast. You can view photos by their import folders, albums you've made, by date visually on a calendar (nice!), by people or location tags, your last import or search.

Editing in Mylio on your Mac or iOS device is easy and nondestructive (you can't edit image thumbnails on iOS devices, but you can edit previews and originals). You'll find a histogram, as well as auto-enhance, crop, and red-eye tools, a before/after comparison button (nice!), temperature and tint sliders for adjusting white balance along with sliders for exposure, contrast, highlights, shadows, whites, blacks, clarity, sharpen, vibrance, and saturation. You can convert photos from color to black-



MYLIO'S EDITING FEATURES are similar to those found in the Basic panel of Adobe Camera Raw, Lightroom, and Apple's Aperture.

and-white, copy edits from one photo to others, change date/time, edit metadata, and revert to your original. When you import photos from Lightroom, the edits that Mylio supports can travel back and forth.

Unfortunately, as of this writing, there's no way to adjust parts of a photo (say, to darken just the sky or remove an object) or create projects such as photo books, print templates or web galleries. That said, you can send photos from Mylio to Lightroom and the company states aggressive plans for future versions. Incredibly, anything you do in Mylio is instantly synced, and thus reflected, on all devices. You can also share photos via email, Facebook, Flickr, export them (say, to create projects with in other apps) and print straight from Mylio (expect Twitter support soon).

BOTTOM LINE

The reality is that you won't have fewer photos in five years, you'll only have more. If you've ever longed to enjoy managing all your photos and videos in one program, easily accessible on all your devices and continually backed up (whew!), then Mylio could be the photo management app for you. Even though you can't create the kind of print or web projects like you can in iPhoto, Aperture, and Lightroom, automatic backup peace of mind may be worth the trade-off.

But price may be a trade-off too: Mylio's Advanced subscription costs \$250 per year for raw editing, 12 devices, 500,000 photos, Lightroom integration, Shuttle, 25GB of cloud storage. A standard subscription is \$100 per year for raw editing, 5 devices, 100,000 photos, Lightroom integration, and 10GB of cloud storage. The new Basic plan offers support for up to 50,000 images in JPG format only plus basic editing, on 3 devices, for \$50/year. But you can kick the tires indefinitely with a trial subscription, covering 3 devices and 1000 photos.

For now, pros who use Lightroom and Lightroom Mobile benefit from Lightroom's superior feature set, but miss Mylio's unique ability to corral all their photos and videos into one program that's accessible (and backed up) on multiple devices. With an app this exciting at version one, it could be a killer app at version two. ■

**THE NEW BASIC PLAN OFFERS
SUPPORT FOR UP TO 50,000
IMAGES IN JPG FORMAT ONLY
PLUS BASIC EDITING, ON 3
DEVICES, FOR \$50/YEAR.**



GRAPHICS & DESIGN SOFTWARE

PAINTER ESSENTIALS 5 GUARANTEES FUN PHOTO PAINTING WITH 31 NEW BRUSHES

BY LESA SNIDER

AWAKENING FROM SEVEN YEARS of slumber, a new version of Painter Essentials has finally hit the streets. Targeted toward hobbyists, art enthusiasts and emerging photo painters, Painter Essentials 5 was redesigned to be smoking fast and far easier to use. It includes a whopping 31 new and useful brushes—including some of Painter 2015's hot new Particle Brushes—plus two new tools for creating mirror and kaleidoscope paintings, a vastly improved photo painting engine, a powerful brush-tracking utility, real-time effect previews, and more. Whether you're an aspiring artist or a photographer, there's a lot to enjoy in this new release.

PICTURED ABOVE: The effects of Oil Painting using a Painter Essential 5's preset.

SPEEDY AND SIMPLIFIED INTERFACE

The 64-bit and Apple Retina-happy Painter Essentials 5 was rebuilt from the ground up using the new code base of its pro-level sibling, Painter

2015. Its simplified, floating-panel based interface exudes a friendly and uncluttered feel. A welcome screen helps those new to the app get started quickly—you can choose to create a new painting or drawing, open one you've already started, create photo art (incredible fun!), pop open a handy QuickStart guide, or visit Corel online.

Also new, is a Navigator panel for zooming in and out of a painting, as well as spatially orienting yourself or repositioning once you're zoomed in, and the same incredibly powerful brush-tracking utility that's in Painter 2015 (go.macworld.com/p2015). This utility visualizes your calibrating brushstroke as a power curve that you can fine-tune with sliders in order to control the point in your stroke where you achieve maximum pressure, how fast the pressure increases, and more. You can also save brush-tracking settings as a preset.

ENHANCED PHOTO PAINTING AND TRACING

It's a rare occasion when the consumer version of a pro-level program becomes more advanced than its sibling, but that's the case with Painter Essential 5's enhanced photo painting feature. Even those new to the program can create an outrageously realistic painting from a photo in no time flat.



THE IMPRESSIONIST STYLE was used here on your author's cat, Sherlock. As you can see here, the result of a photo painting from Painter Essentials 4 and Painter Essentials 5 is vastly improved.

PAINTER ESSENTIALS 5



AT A GLANCE:

While Painter Essentials 5 includes numerous and useful enhancements, its photo painting feature alone is worth the price of admission.

PROS:

- Faster performance
- 31 new brushes, including Particle Brushes

PRICE:

\$50

COMPANY:

corel.com



USING PAINTER Essentials 5's new Kaleidoscope tool, you can quickly create unique designs.

The insanely simple painting process goes like this: Use the Photo Painting panel to open a photo, pick from 11 painting style presets, and then click the Play button. Next, watch in amazement, and enjoy a beverage, as the program paints millions of brushstrokes right before your eyes. When the painting's finished, the Soft-Cloner brush activates itself, allowing you to paint over areas in order to restore details from the photo, especially handy for eyes and faces.

The whole photo painting process is shockingly fast, even on large file sizes. The only tiny downside is that there's no photo painting status bar, so it can be tough to know when the program is finished painting, especially when using the pencil-based presets with really thin strokes.

You can customize the photo painting in myriad ways, too. For example, you can add your own brushstrokes—with or without the tracing paper (original photo) visible—as well as experiment with a variety of effects with real-time previews (Color Overlay and Quick Warp effects are new in this version). The auto-tracing feature works in a similar 3-step fashion, and is loads of fun for the young or young at heart.

NEW BRUSHES AND TOOLS

Painter Essentials 5 sports 31 new brushes, for a grand tally of 126. (In

comparison, Painter 2015 has 806, though at a price point of \$429, you pay for them.) The Brush panel, now nicely tucked into the upper-left corner, opens to reveal 12 brush categories with a handy row of recently used brushes perched up top and a nice brush tip preview gracing the bottom of the panel.

Among the new brushes are a subset of the mind-blowing Particle Brushes that debuted earlier this year in Painter 2015, which you can use to create realistic fur, fabric, and so on—unfortunately, Painter 2015's super-slick Particle Spring Fireball brush isn't included. These revolutionary brushes work according to the laws of physics and, when you paint with them, a bubbling array of speckled particles emanates from the brush tip to produce random and chaotic patterns, lines, and colors as you move or hold your stylus in place (a stylus is the pen used with digital drawing tablets, like those from Wacom).

Painter Essentials 5 also sports new Jitter Brushes, two new tools for creating a mirror and kaleidoscope painting, a variety of tools for transforming selections (think scaling, rotating, skewing, distorting, and so on), enhanced paper textures, and better support for Wacom digital drawing tablets.

BOTTOM LINE

If you've ever wanted to try your hand at painting, or if you're a photographer who's longed to turn a photo into a realistic painting (a viable product to sell in your photography business), then this is the program for you. While Painter Essentials 5 includes numerous and useful enhancements, its photo painting feature alone is worth \$50. Besides, this is the only consumer-level program on the planet that gives you real-world painting power in digital form. So, if you've got an extra \$50, consider Painter Essentials 5 the perfect artistic and inspirational gift... even if it's to yourself. ■

**BESIDES, THIS IS THE ONLY
CONSUMER-LEVEL PROGRAM
ON THE PLANET THAT GIVES
YOU REAL-WORLD PAINTING
POWER IN DIGITAL FORM.**

Hot Stuff

What We're
Raving About
This Month

GEE-WHIZ SMARTPHONE PROJECTOR

For \$27, the Gee-Whiz Smartphone Projector (photojojo.com) is a lot of fun. You assemble it yourself from cardboard pieces and a magnifying lens—no cords or batteries needed. Slide your phone into the stand, which has silicon grip pads to prevent slippage, and watch your videos projected eight times larger on a wall. It works best if your brightness is turned all the way up, and unfortunately doesn't fit an iPhone 6 Plus. But we still think its name is accurate. **SUSIE OCHS**



Hot Stuff

What We're
Raving About
This Month



SEAGATE SEVEN

The \$100 Seagate Seven (seagate.com) is billed as “the thinnest 500GB portable drive,” but it’s not just thin—it’s also tough. The drive arrives in a steel enclosure, but retains its lightness, at just over 3 ounces. And since it’s only 7mm thick, it’s easy to slip into your laptop bag. The Seven comes with a braided USB 3.0 cable. —JOEL MATHIS



JAMSTIK+

Think of the Jamstik+ (jamstik.com) as a “smart guitar,” but it’s actually a lot more versatile than that. Connecting to your iPhone, iPad, or Mac with Bluetooth LE, this instrument helps you learn to play, or lets you lay down tracks in GarageBand or other apps that support MIDI instruments. And you’re not just limited to guitar—the Jamstik+ can be a banjo, piano, harp, or even a sitar. At only 16 inches long and 2 pounds, 4 ounces, it’s perfect for travel, and the strings are real guitar strings so experienced players will feel right at home. Plus, it’s always in tune. —SUSIE OCHS



Why Apple should go into the mobile network business

If Apple really wants to control the whole experience of using an iPhone, it's time to consider becoming an MVNO.

BY KIRK McELHEARN





One of the things that has certainly helped Apple be successful is making both the hardware and the software that runs its devices. Because of this, issues of compatibility have always been less problematic on Macs than they have on PCs.

But when 2007 rolled around, and Apple introduced the iPhone, Apple no longer controlled the users' end-to-end experience. Using this device depended on not just hardware and software, but also a mobile phone network. Sure, using a Mac on the Internet has also depended on ISPs (Internet service providers), but Internet access contracts are simpler, and easier to understand, and generally don't have coverage issues or data caps.

With the iPhone, and later with the cellular iPad, users have to worry about whether or not they choose the correct contract, how many minutes or how much data they have per month, and whether they live and work in an area covered by their provider.

You can buy an iPhone and a contract with a specific mobile provider at the same time. But imagine a different situation, where Apple sells you a new iPhone or iPad and also sells you, if you choose, a contract to connect that device to any network, perhaps, even, and any country. And the provider you sign up with is Apple. For a monthly fee, Apple could provide you with a full

range of services: calls, texts, data, cloud storage, music streaming, access to videos, and much more, and give you unlimited data for any of its own services. You would no longer have to worry about data caps for, say, streaming music or movies. And Apple could probably do this much more cheaply than current mobile phone operators.

ONE PLAN, EVERY CARRIER

To do this, Apple would become an MVNO, or a mobile virtual network operator. There are dozens of these in the United States (go.macworld.com/mvno), and most countries also have similar operators. An MVNO simply buys minutes and data from a larger mobile phone operator, and then sells the service under their own brand.

But Apple could do this differently. Given the size of the company, and the number of users who would potentially purchase such a plan, Apple could buy minutes and data from all of the major mobile phone providers, ensuring that you get coverage everywhere.

There is one hitch to this in the United States: cell phones use two

standards, CDMA and GSM. Most of the rest of the world uses GSM only, but in the United States, Apple has to sell two different phone models because of these competing standards. This would mean that with the current situation, coverage might still be fragmented, but outside the United States, where everyone uses GSM, coverage would be much better. For example, where I live, in a small village in the UK, only one of the 4 large mobile phone providers offers good coverage. However, the same iPhones have been able to use both CDMA and GSM, and Apple certainly make an iPhone that handles both types of network.

The advantage to this would be clear. Given Apple's size, the company could negotiate rates that would be highly competitive with current contracts. Apple could sell a rolling plan at a monthly fee that would allow users to get a new iPhone every year or two, as soon as the new model is released, and continue with the same plan. This could ensure more sales of new devices, and he could make it simpler for users to always have the latest model.

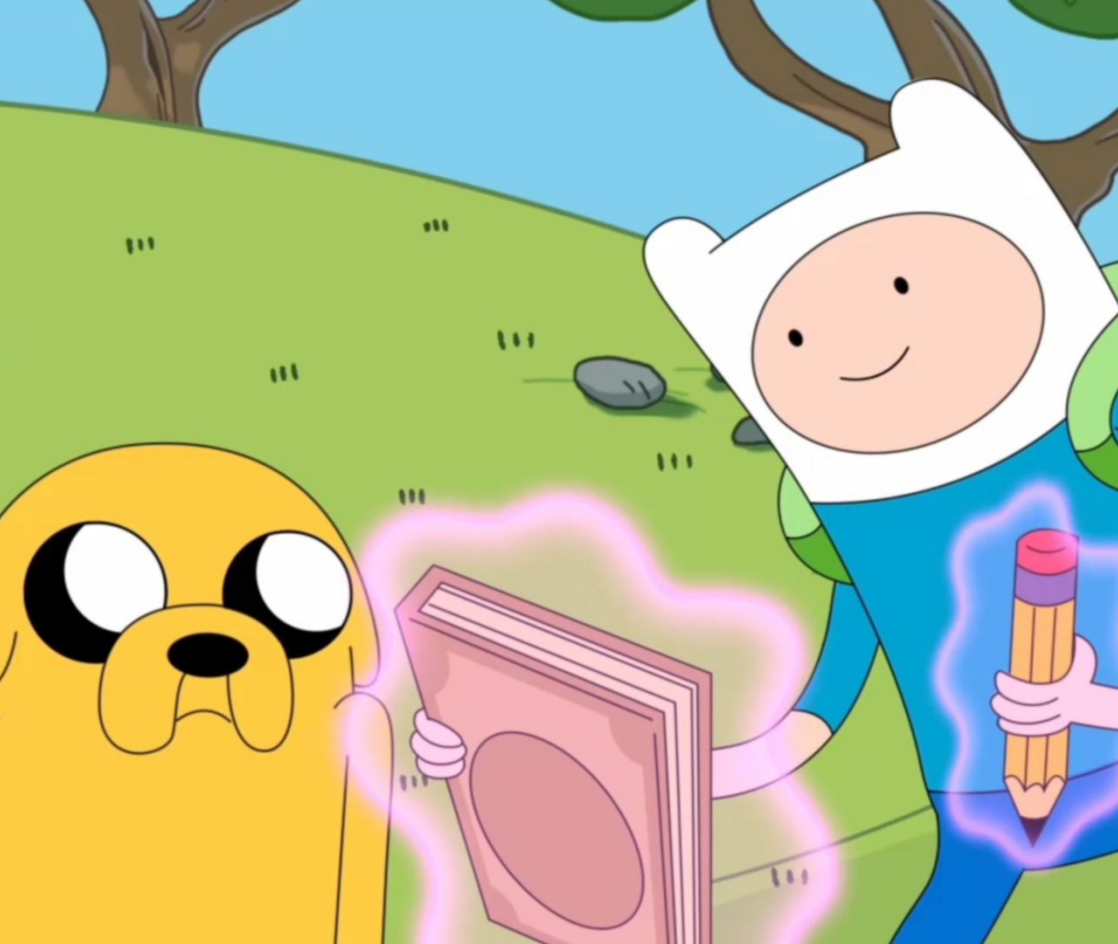
The biggest hurdle would be the mobile phone companies. They might be reticent to agree to such a change in their business model, but,

THIS COULD BE THE BEST WAY FOR APPLE TO EXTEND ITS USER BASE AND ENHANCE CUSTOMER LOYALTY.

if they were to save money on customer acquisition, it could, in the long term, be more profitable for them as well.

As I was working on this article, a rumor surfaced that Google is planning to become an MVNO ([go. macworld.com/reuters](http://go.macworld.com/reuters)). Reportedly, Google will provide service through two networks, Sprint and T-Mobile, but since Google does not make smartphones—yet—they would not be providing a full end-to-end solution, which is something that Apple can do.

In the long term, this could be the best way for Apple to extend its user base and enhance customer loyalty. If Apple allowed users unlimited data for any of its services—iCloud, iTunes Match, the App Store, the iTunes Store, and whatever future music streaming service the company will be releasing—it would make it much simpler for users to take advantage of these services on their phones. It would be good for Apple, and good for Apple's users. ■



Adventure Time Game Wizard for iOS lets you create worlds with pen and paper

BY KIRK MCELHEARN

The responsive touchscreen of an iPhone or iPad is perfect for creating within games as much as simply playing them—it's part of the reason why Minecraft has been even bigger on phones and tablets than computers or consoles. Cartoon Network's Adventure Time already has a number of App Store entries (go.macworld.com/cnat), but the new Game Wizard (\$5, go.macworld.com/wizard) takes a new tack, letting you construct your own side-scrolling game worlds from scratch and then share them with the online community.

It has one other big, interesting thing: the ability to sketch out your levels in specially marked, printable grids, and then scan it into the game using your device's camera. Got a knack for constructing elaborate, well-composed game worlds? You can print out a dozen sheets of paper and design your sprawling masterpiece, and then stitch it all together digitally.

But should you? I fired up Adventure Time Game Wizard and my increasingly dusty printer to try my hand at world building, both with the finger and a ballpoint pen.

WIZARD WORLDS

Game Wizard builds its core experience upon a solid 2D action game



starring the familiar heroes, villains, and locations from the offbeat animated series. The virtual controls are a bit awkward (tip: use the directional pad, as the movement slider is terrible for vertical inputs)



and the game design feels pretty familiar. You'll slash and shoot enemies and leap between platforms, while occasionally taking down tougher boss characters.

It's not remarkably original, but it is amiable fun—and it does a great job of maintaining the tone and style of the show. Game Wizard even introduces a brand new main foe, the Doodle Wizard, voiced by “Weird” Al Yankovic, with the rest of the characters handled by their respective actors from the TV series. Kids should dig it, and adult fans ought to

find it agreeable, but the pre-made stages aren't really the key draw here.

That, as you might imagine, is the game's creation suite, which makes it easy to put together and play through your own game levels. You're limited to the characters, enemies, and environmental assets seen in the campaign, which doesn't allow for a ton of visual customization—but you're given the flexibility to create your own stage arrangements on a blank grid, and the large space allows you to design twisting, complex challenges. Well, that's assuming you

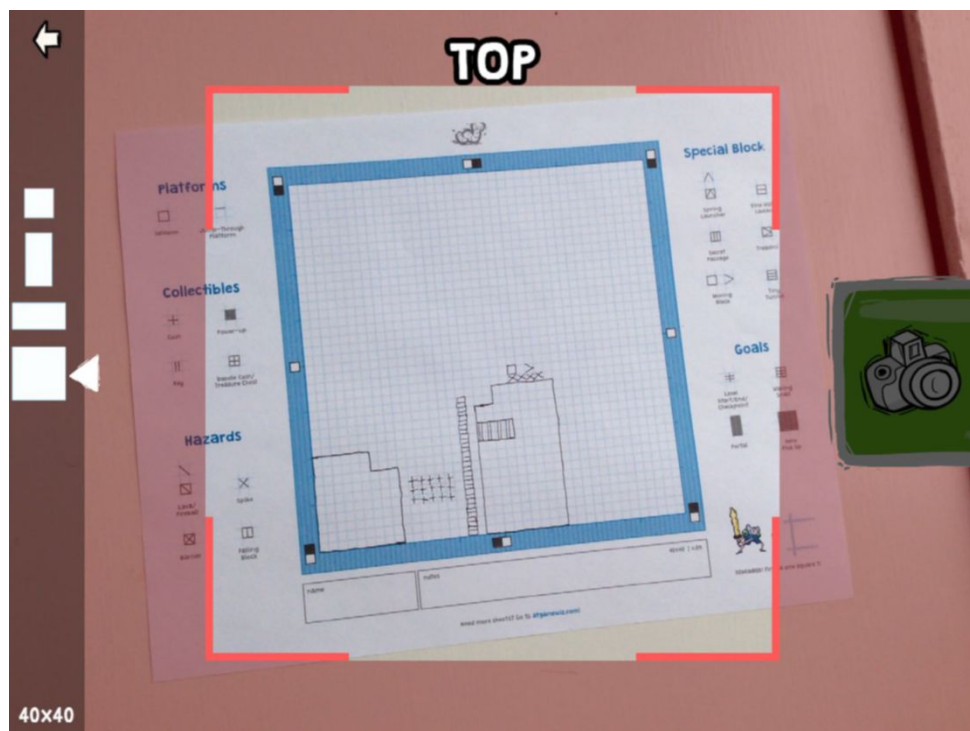
have the patience for it.

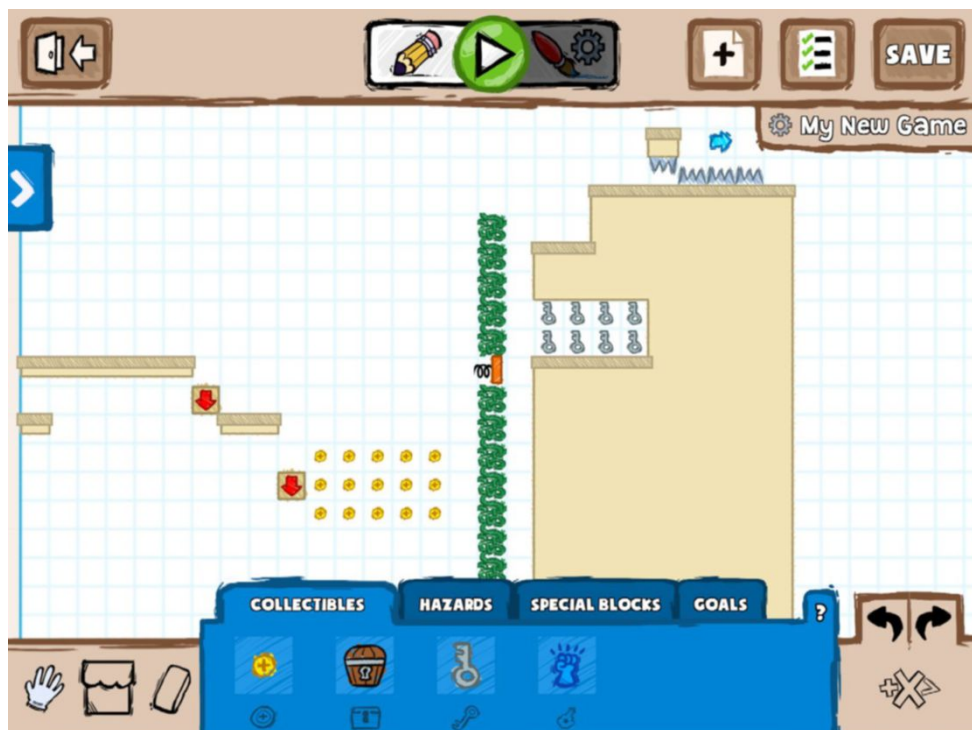
Building a worthwhile stage takes time, but the digital interface is pretty intuitive and easy to understand within moments. You'll draw terrain, place hazards and moving elements, and set the goal and checkpoints; you can even put in hidden areas for a secret surprise for anyone else that downloads and plays your stage. Sharing your levels to the built-in portal is a snap, and there are already loads of free user-created stages to download and play through.

PAPER, CRAFT

So how does paper factor into this equation? You can print out a starter kit tutorial packet from the official website, or just print the basic grid sheets from either the Web or the app itself. Within the packet, you'll find the instructions on how to turn the blank grid into a digital masterpiece. Truth be told, it's a lot of tracing lines and adding dashes and X's and the like—you'll never have to try and draw a character or enemy, because that stuff actually is added

YOU'LL NEED TO ALIGN the camera with the blue border around the grid to pull your drawn level design into the game.





later on the app side of things. All you're doing is plotting out the layout and basic contents.

From there, you can scan the page into the app using your iPhone or iPad's camera. And that's where the shine wore off a bit for me. You'll need a ruler and a steady hand to sketch with success, and even then, the camera recognition seems a bit spotty. When I scanned my first stage attempt, the entire world ended up being full of lava—which meant Finn perished immediately once the game

started. Not my intention!

In later attempts, the game would occasionally misinterpret what I'd designed in spots, breaking apart platforms and attaching together items that I meant to be apart. Luckily, you can tweak everything digitally within moments, so unless your hand-filled grid is an utter mess, it won't take much effort to fix the issues. That said, you're still putting a lot of time (and paper and ink) into something that you can do entirely within the app with much less hassle.

THIS IS HOW PART of one hand-drawn grid transferred into the digital creation space. See anything that seems amiss? Luckily, small misreads can be fixed within moments.

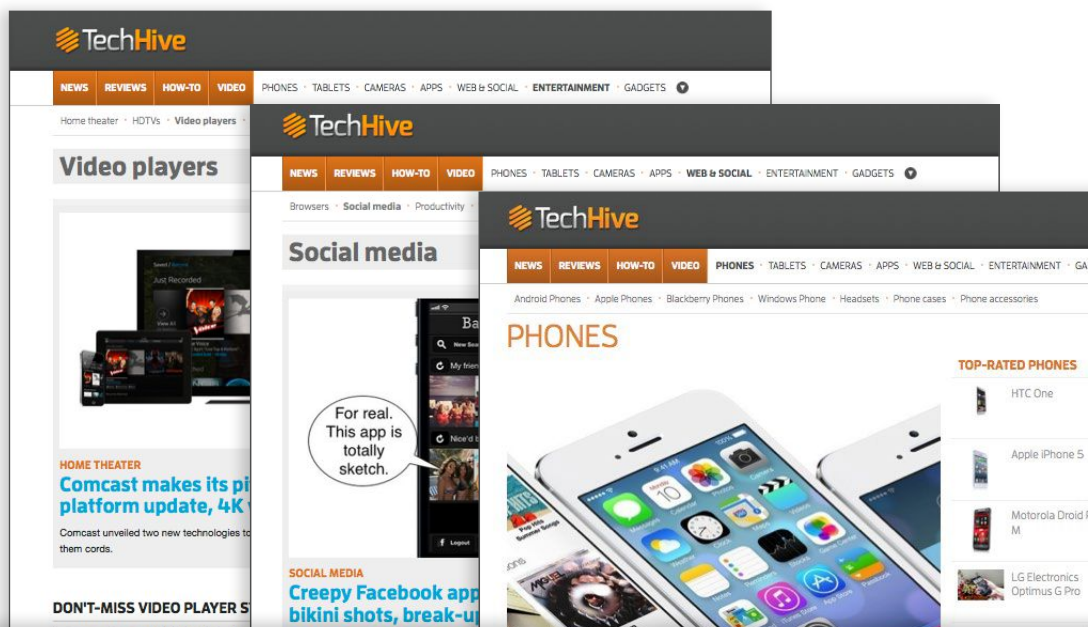
But I concede that I'm probably not the target audience here. I got a kick out of drawing levels on paper and scanning them into the game, but struggled with what felt like an unnecessary use of added time. Kids, on the other hand, may have all the time in the world, and will love building out amazing, personalized worlds and then pulling their own original creations into the game. And parents concerned about extensive screen time will happily trade some paper and ink to get their kids off of the iPad for an extended period.

This is how part of one hand-drawn grid transferred into the digital creation space. See anything that seems amiss? Luckily, small misreads can be fixed within moments.

It's that sort of distinctive edge that makes Adventure Time Game Wizard more than an average iOS game for young fans of the show: it's a project, a cross-media exploration of creative joy, and it can be a lot of fun. And with surely scads of other players designing and sharing their own small wonders for everyone to enjoy, it could stick with fans for quite some time. ■



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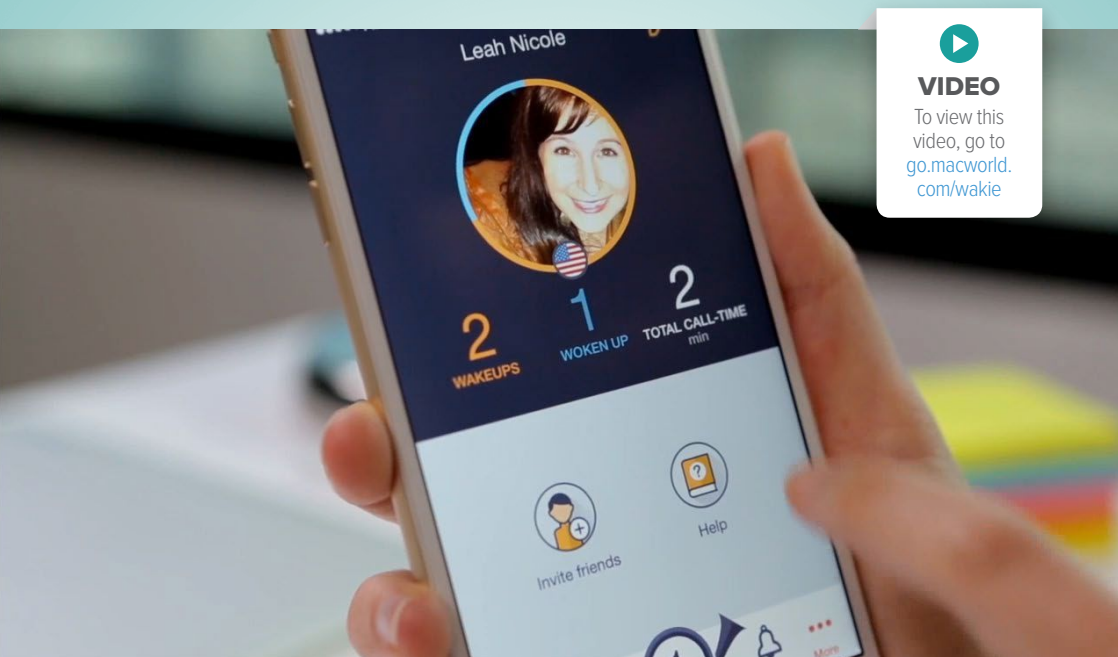


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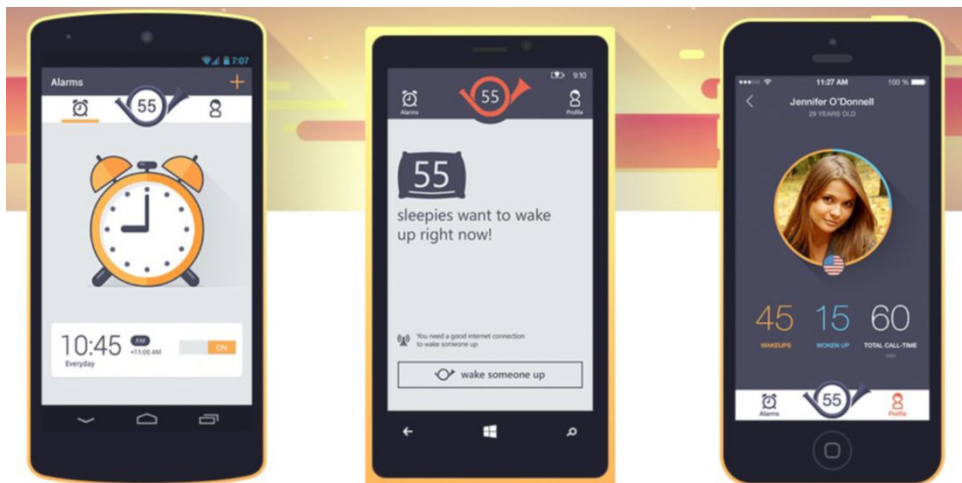


VIDEO

To view this video, go to go.macworld.com/wakie

Wakie for iOS wants you to ditch the alarm clock and wake up with strangers

BY LEAH YAMSHON



There are lots of alarm clock apps out there—alarms with traditional tones, alarms that ditch the sound for a screen brightening approach (morningsun.picobrothers.com), alarms that get angry (meetcarrot.com/alarm) when you try to snooze.

And then there's Wakie (wakie.com). Part alarm, part social network, Wakie is a community-based alarm clock, where members of that community will call you to wake you up in the morning. That's right: Instead of an alarm, your phone will ring, with an anonymous stranger on the other end who is supposedly ready to coax you out of bed.

Here's how it works: Set an alarm just as you would in any other app before going to bed, and you'll get a call from someone within five minutes of your

desired wake up time the next morning. On the flip side, you can wake other people up, too. Just tap the center button to connect to a "sleepy"—someone who needs a wake-up call.

Wakie hides both of your phone numbers and limits your calls to one minute, but it's not completely anonymous—you can see the other person's country of origin during the call, but not that person's name, profile, or photo. You can, however, leave a note in the Community section if you want to try to hunt down someone you've chatted with. You've been warned—the Community board reads a lot like Craigslist's "Missed Connections" section, but sometimes users want to chat about other random topics of, ahem, varied levels of appropriateness.

Once you install the app, you're asked to connect via Facebook and link your

...AM I THE ONLY one that thinks this is super weird and awkward?

phone number. That's how Wakie vets its community to try to keep it friendly—while others won't know who is calling whom, the Wakie developers can keep tabs on all interactions.

Considering that I can barely mutter a quick “good morning” to my boyfriend every day through my grogginess (I'm pretty much useless for the first 20 minutes that I'm awake), the thought of talking to a stranger when I'm not 100 percent focused horrifies me. But, maybe that's because I'm jaded and used to living with a partner. If I lived alone, or if I was traveling, or on opposite schedules with my S.O., then I could maybe get on board with this whole “chit-chat with a stranger to help you wake up” phenomenon. Maybe. As long as it didn't get creepy.

That was actually a big concern of mine before I started testing the app. Let's be real, here, Wakie has the potential to get really gross, really fast, since it's all anonymous. To its credit, though, I only had one call approach the “ick” line, so I simply hung up. You're not obligated to chat for the entire minute, and you can drop the Wakie team a note if you want to report any bad behavior.

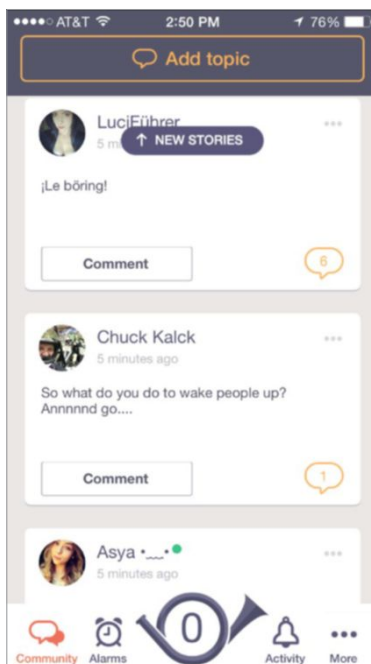
Most of my interactions with Wakie users were surprisingly tame. I helped someone in Japan practice English, learned that someone in the U.K. was prepping for a job interview, and

talked about the Italian countryside.

Another dude from the U.K. trolled me a bit, and then of course there was the “sleepy” who got a little fresh when I called to wake him up. (Side note about the app's demographic: All of my chats were with men, and Wakie supposedly randomizes the calls...)

So, if you want to give Wakie a try, it's an interesting little social experiment that can add something different to your morning routine. As for me, I'll stick with my iPhone's stock alarm clock.

Wakie is available for free in the App Store. ■

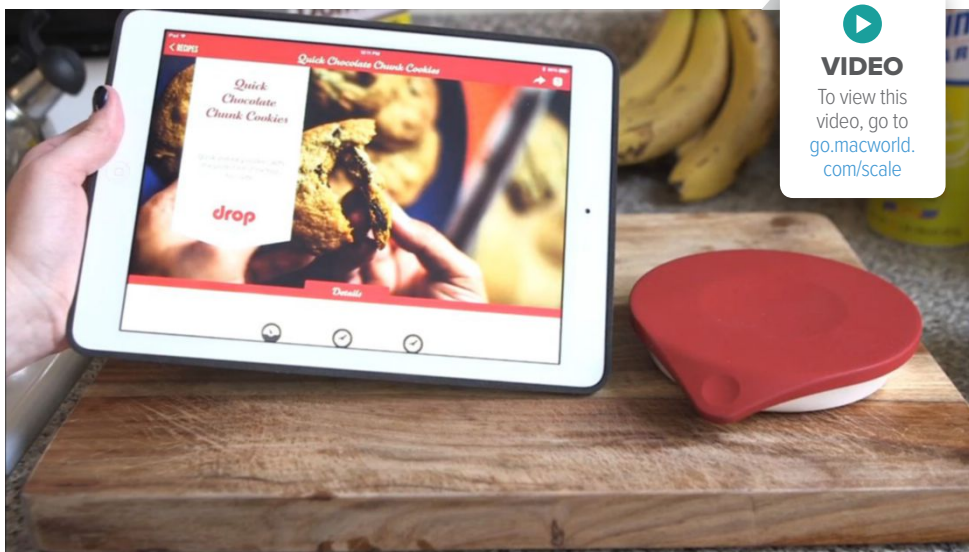


BESIDES THE WAKE UP calls, you can chat with other users in Wakie's public community forum.

GADGETS

DROP: AN iPad-CONNECTED SCALE FOR BEGINNING BAKERS

BY CAITLIN McGARRY

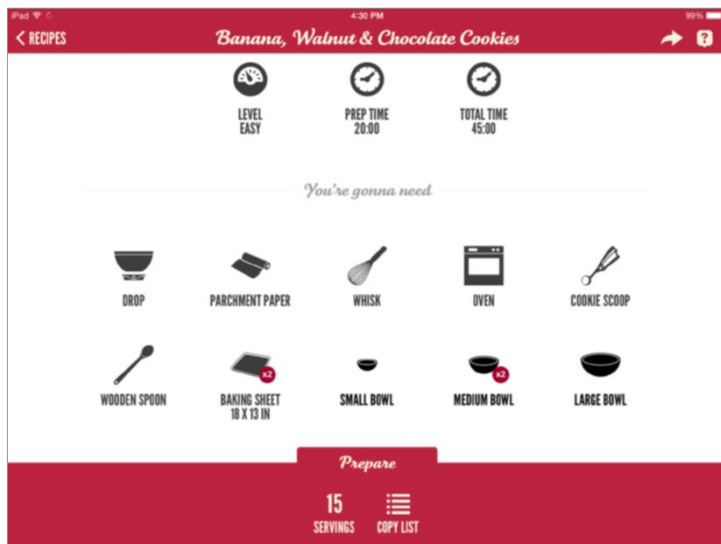


VIDEO

To view this
video, go to
[go.macworld.
com/scale](http://go.macworld.com/scale)

I LOVE TO BAKE, but it can be such a finicky process. Add too much baking soda? Your cookies are ruined. Try to substitute regular milk for buttermilk? Disaster. It doesn't allow for interpretation the same way cooking does. That's why Drop's new iPad-connected scale (getdrop.com) is so compelling: It simplifies even complicated recipes down to baby steps, no measuring required.

I already bring my iPad into the kitchen to replace my recipe collection and to act as my spirit cooking guide. Setting up Drop's \$100 Bluetooth scale and companion app just makes my tablet even more useful.

**THE DROP KITCHEN**

companion app tells you exactly what you need to have on hand before you get started.

THE SETUP

Drop lacks a display of any kind, but it's incredibly easy to set up. It comes equipped with a battery that works out of the box. Simply tap the button on the front of the scale and wait for the red LED light to flash, which means it's ready to go. Then install the Drop Kitchen app ([go. macworld.com/kitchenapp](https://go.macworld.com/kitchenapp)) on your late-model iPad—the original and second-gen iPads are sadly incompatible with Drop—and make sure the app is open before you try to pair your devices. If the app isn't open, your iPad's Bluetooth will search endlessly to find Drop and won't be able to find it.

After the small red teardrop-shaped scale is paired to your iPad, take a spin with Drop Kitchen and find some recipes you like. The app has tips, tricks, and step-by-step instructions for baking a variety of treats. It also weighs the ingredients you dump into the mixing bowl placed on top of the scale and displays your progress. In theory, you should never need to use a measuring utensil again.

THE TEST

I put Drop through its paces with two of the app's cookie recipes. At first

DROP**AT A GLANCE:**

Baking with your iPad in tow just got easier with this Bluetooth scale, even if it is a little pricey.

PROS:

- Beautifully designed app with helpful recipe tips
- Super simple setup

CONS:

- No digital display
- Missing promised ingredient substitution feature at press time
- Expensive for novice bakers

PRICE:

\$100

COMPANY:

getdrop.com

it was a little strange that the scale lacks a display—which definitely limits its appeal—but as you start spooning and squeezing ingredients into the mixing bowl, watch as the app reflects in real-time how much you're adding. A dotted line marks the target weight, so keep adding ingredients until you hit the mark. Just make sure to zero out (or tare) the app so it doesn't take into account the weight of the bowl or the other ingredients you've already put in it.

I made very basic chocolate chip cookies first and then more complicated confections with banana, oats, chocolate chips, and walnuts, both without any measuring cups or spoons. (OK, I did use a 1-cup measure to scoop out flour, but otherwise I would've been covered in a fine white dust.) The app recognizes when you've added enough of an ingredient and proceeds on its own to the next ingredient card. In some cases I needed to manually tap to move ahead, but you can tap the scale's button instead of your iPad to avoid smudging its screen.

One of Drop's stand-out features are its ability to scale recipes up or down depending on the amount of ingredients you have on hand or servings you want to make. Only have 4.2 ounces of chocolate chips instead of 6.2? Weigh out the ingredient with Drop before you get started and it'll adjust the amounts of every other ingredient accordingly. The app details everything you need to have on hand, including utensils and ingredient ounces, so you the app can help you adjust a recipe before the mixing begins. Once things start happening in the kitchen, you'll be grateful you set out every utensil and every ingredient in advance.

My Drop experiments were overall successes. The chocolate chip cookies were a little too large and a little under baked, but that was my fault—I was a little distracted shooting this video. But my coworkers scarfed them down in seconds. My second attempt went smoothly. The three batches of cookies I baked for a dinner party were such a hit that my guests were asking for Drop demos.



THE DOWNSIDE

One feature that I couldn't wait to try but wasn't available yet was the ingredient substitution option. Tapping to substitute an item you're out of

results in a “coming soon” message, so I was disappointed I couldn’t use it when I had no idea where to procure cacao nibs.

I’m also looking forward to the day when you can upload your own recipes or import ones from other sites/apps. For now, you can only choose from the app’s recipe database, which, to be fair, is constantly growing.

Bakers in the market for a digital scale probably won’t turn to Drop if only because it lacks a display. You can’t just weigh an ingredient without going through the whole process of selecting and making a recipe—serious chefs don’t have time for all that.

THE VERDICT

I am certainly no expert but I do enjoy baking when I have time, so Drop is the perfect tool for me. It’s small and takes up no space at all in my Brooklyn kitchen. It keeps my iPad from looking like a toddler smeared her food all over it. It results in delicious treats.

There are other connected scales, like the \$70 Perfect

Bake (go.macworld.com/bake), that are cheaper and give you a little more bang for your buck. The Perfect Bake includes a digital display, three mixing bowls, an oven thermometer, and an iPad stand out of the box. But it also lacks Bluetooth and needs to be connected to your tablet via a wire that has to be plugged into a headphone jack. That’s not exactly convenient.

If you have \$100 to shell out on another gadget and want to step up your baking skills, Drop will definitely guide you in the right direction. Serious bakers can skip this scale. ■



SCALE A RECIPE DOWN by weighing out a dwindling ingredient before you get started.



CHARGERS

LEGION METER: CHECK UP ON YOUR USB CHARGERS

BY MICHAEL SIMON

CHARGING IS AN integral part of life. No matter where I go I'm forever scouting outlets and lugging around expansion packs to make sure I have enough juice to get through the day. My battery percentage is constantly on my mind, and at any given moment I'm acutely aware of how much is left and how long it'll take to get back to a safe level. But for all my voltage vigilance, I don't know a whole lot about what makes one power adapter better than another.

PLX Devices knows charging. Its original Legion (go.macworld.com/legion) external battery redefined charging with its built-in OLED display that provides live feedback for a variety of useful stats. It quickly became my favorite way to charge, even when there was an outlet within reach.

With Legion Meter (go.macworld.com/legionmeter), PLX is bringing that kind of battery know-how to the rest of our chargers. Small, light, and smart, the Legion Meter works with any USB charger in your arsenal, delivering accurate readings of both the port's output and your

LEGION METER



AT A GLANCE:

Legion Meter will provide everything you could possibly want to know about your chargers, all while helping you maximize their potential.

PROS:

- Small, capable multimeter with intelligent live readings
- Boosts charges coming from your Mac's USB port

CONS:

- Most users probably won't get the maximum increase in charging
- Plastic housing feels cheap

PRICE:

\$40

COMPANY:

plxdevices.com

battery's milliwatt hours, and helping you pinpoint the fastest, safest ways to charge your devices.

MEASURING THE JUICE

The miniature device doesn't feel cheap, exactly, but the plastic assembly isn't exactly up to the rugged standards set by Legion. A small button at the top acts as the wake and advance control, and you can long-press it to switch the orientation. At 2.5 inches in length, the Legion Meter won't work so well in tight spaces, as it needs to attach to the end of your charger.

After you insert the Legion Meter into your charger's USB port, you'll plug your cable into the USB port on the back of the meter. The Legion Meter instantly begins collecting data from each end, providing something of a diagnostic check of both the charger and the device being charged. It won't actually alert you to anything that may be wrong, but a wealth of information is available on its tiny screen, including a reading of the USB port's voltage, current, and power, as well as a running tally of the milliwatt-hour capacity of the device's battery.

But while Legion Meter is quite useful for testing the strength of your

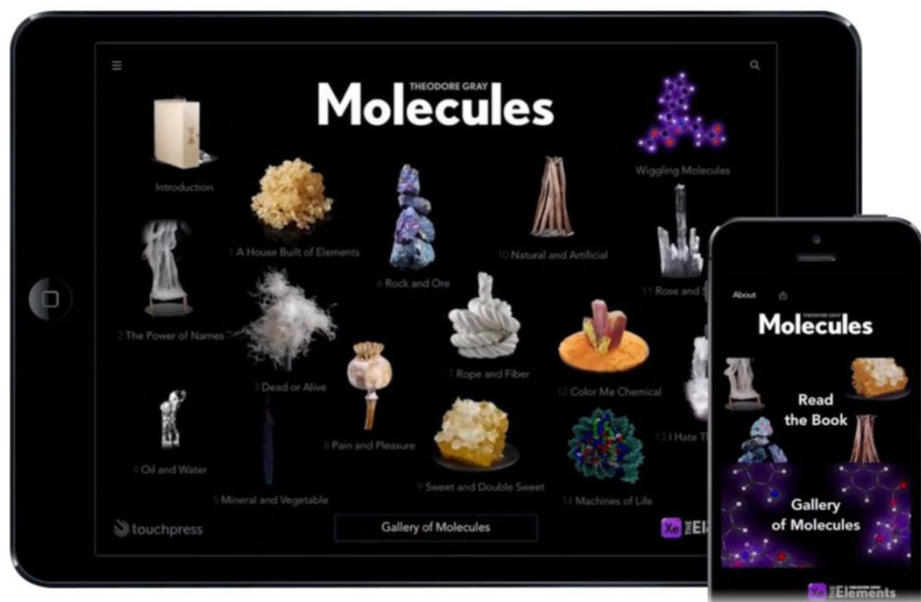


various chargers (as you might have guessed, Apple's are among the best), the device's premier feature is its promise to speed up your charging by as much as 92 percent. A recessed switch on the side toggles between accelerated charging (A) and data passthrough (D) modes. The switch is a pain to use, requiring a paper clip and a bit of force to move it, but it lets Legion Meter dynamically open and close the stream of data heading to your USB port, thus maximizing your charge speed.

A RECESSED SWITCH ON THE SIDE TOGGLES BETWEEN ACCELERATED CHARGING (A) AND DATA PASSTHROUGH (D) MODES.

I didn't see much of an improvement in the time it took to juice up my devices over a USB port with no data capabilities, but plugging into my Mac was a different story. Previously, I rarely used one of my MacBook's spare USB ports to charge my iPhone, but thanks to Legion Meter's ingenuity, I might be doing it a bit more often. When in data passthrough mode, your device will connect as normal, with your iPhone sipping whatever available power it can get, but all that changes when you flip the switch—all syncing with iTunes is severed, so every drop of USB voltage can be used solely for charging.

While not quite up to the 92 percent claim, I consistently received faster charging through my Mac's USB port, in some cases reaching about 50 percent higher speeds with my iPhone 5 (and about 25 percent with an iPhone 6). It's not that PLX is overstating Legion Meter's abilities, but in my testing, charging times varied widely depending on a variety of factors. For example, I found that when my phone was running low, Legion Meter was more helpful than when it was nearly charged, so there may very well be a combination of device and charger out there that delivers on the promised gains. But even with nominal increases in charging speed, Legion Meter will make a great addition to your charging arsenal. ■



APP

MOLECULES FOR iOS: THIS INTERACTIVE SCIENCE BOOK BRINGS LEARNING TO A NEW LEVEL

BY JEFF MERRON

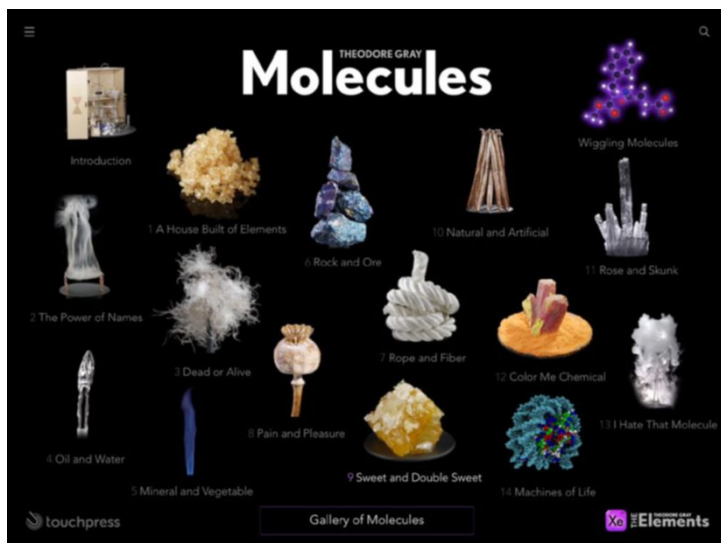
WHEN THE iPad made its debut in April 2010, the first Touchpress app—*The Elements: A Visual Exploration* (go.macworld.com/visual)—was right there with it. The app was actually an ebook in disguise, with stunningly beautiful and interactive 3D illustrations, and it seemed almost perfectly designed to rebut skeptics (and there were many. See go.macworld.com/many) who believed tablets could only be niche gadgets. *Elements* truly showed us the iPad's potential as a vessel for rich, interactive experiences that wouldn't be the same on the iPhone or even on your Mac.

Since then, Touchpress (touchpress.com) has released more than 20 similarly rich coffee-tablebook-esque apps on science, math, music,

literature, geography, and history. The studio's latest release, *Molecules* (go.macworld.com/molecule), is a worthy successor to *The Elements*—and, like that pioneering app, it was written and developed by Theodore Gray.

It's easy to see why Apple hailed *Molecules* as one of the best iPad apps of 2014. On the app's first page, Gray says that *Molecules* is not in any way intended to be a textbook—he likens it, instead, to a chemistry set, an interactive way to explore how atoms combine to make molecules, and how (and why) even molecules with very similar structures differ. The app's opening image of an old-school chemistry set serves as an immediate invitation to explore—like practically every illustration in the app, you can rotate and view it in 3D.

You can read *Molecules* in a linear fashion if you'd like to, but it's much more fun to search for subjects that really appeal to you. The table of contents is presented as an eye-popping array of spinning images of everyday objects and substances accompanied by easy-to-read chapter titles. This layout makes the message clear: jump in wherever you want. The app explains each subject without unnecessary use of scientific jargon, so the “jump in” approach succeeds—you can browse topics and bounce around the app as you please. (A drawback, however, is that the



MOLECULES BY THEODORE GREY



AT A GLANCE:

Few iOS apps are as thoughtfully designed as *Molecules*, and even fewer combine superb visuals with clear writing that encourages exploration. If you're a parent or teacher looking for a way to engage middle or high school students in learning about the material world, *Molecules* looks like a pretty good investment. But be careful: you may find yourself spending lots of time with the app yourself—because, unlike those old science textbooks, it's a lot of fun.

PROS:

- Rich images and models rotate to provide multiple viewing angles
- Engaging topics that are easy to read for all levels
- Looks terrific on both the iPhone and iPad

CONS:

- Lacks bookmarking, highlighting, and note taking capabilities

PRICE:

\$14

COMPANY:

touchpress.com

THE HOME SCREEN OF MOLECULES, as viewed on the iPad, is an animated display of chapter titles that invites readers to start anywhere.

app lacks even basic bookmarking, highlighting, and note taking capabilities—really stressing that this isn’t a textbook.)

Random skimming of *Molecules* is enjoyable because the app connects our everyday chemistry experiences with appealing, simple explanations and descriptions. For example, a section on double sugars first discusses, in a moderately technical fashion, the bonding of monosaccharides to form a disaccharide. But the text very quickly segues into more digestible (har, har) information: “A lot of the work done by the sweetener industry boils down to transforming one of these sugars into another ... When you look at the ingredient list for a food product, remember that it doesn’t much matter where the sugar comes from.”

Besides sugar, *Molecules* covers other household items like salts, oil, soap, rope, wool, painkillers, and peppers. The illustrations and animations are fun to play with, but after a while it’s more satisfying to read about the hows and whys—and the short paragraphs perfectly complement the visuals.

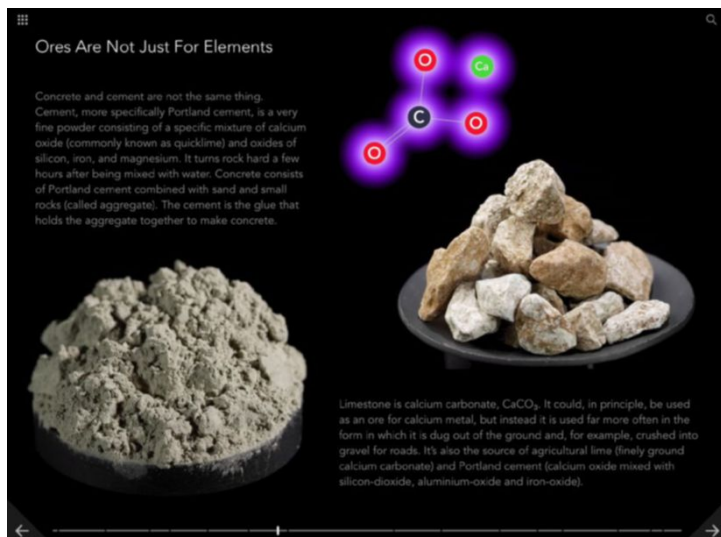
Molecules also looks terrific on the iPhone. As on the iPad, you can switch back and forth between viewing the app as a chronological ebook organized with chapters, and skimming an alphabetized gallery of hundreds of molecules. Exclusive to the iPhone is the ability to adjust the text’s font size and change the default white text on black background to black text on a white background—and on the iPhone’s smaller screen, these capabilities are a real plus.

The photo illustrations by Nick Mann are stunning, and simulations of how molecules change their look and behavior as their environments change adds depth and encourages exploration beyond the app’s scope. *Molecules* also includes superb simulations that enable you to twist and turn molecules any way



MOLECULES IS A UNIVERSAL

APP best viewed on an iPad, but even on the iPhone 6’s relatively small screen it’s a pleasure to view and read. This section on vanilla is from the “Natural and Artificial” chapter.



WHAT'S THE DIFFERENCE between cement and concrete, and what's calcium carbonate got to do with it? This page, like most others in *Molecules*, explains a lot with a little—in this case, just a few simple sentences, two photos, and a diagram of a molecule.

you want, and see their behavior at different temperatures. The simulations are built on molecular dynamics code developed over decades at the University of Illinois at Urbana-Champaign.

Molecules (the app) was released simultaneously with a lavish hardcover book: *Molecules: The Elements and the Architecture of Everything* ([go. macworld.com/hardcover](https://go.macworld.com/hardcover)). The content is almost the same, but each format has their pros and cons. The app is a ton of fun, thanks to the ability to view and play with simulations and 3D images. But the images themselves look better in the book—they are larger, thanks to the book's oversized pages, and the photo resolutions are higher. So, if you're especially interested in the subject, you may even want to consider picking up both versions.

BOTTOM LINE

Few iOS apps are as thoughtfully designed as *Molecules*, and even fewer combine superb visuals with clear writing that encourages exploration. If you're a parent or teacher looking for a way to engage middle or high school students in learning about the material world, *Molecules* looks like a pretty good investment. But be careful: you may find yourself spending lots of time with the app yourself—because, unlike those old science textbooks, it's a lot of fun. ■



KEYBOARD

LOGITECH KEYS-TO-GO: A GREAT iPad KEYBOARD THAT DOESN'T LOCK YOU INTO A CASE

BY JASON CIPRIANI

AS I MENTIONED IN the first Work Beyond Mac column (go.macworld.com/beyond), my go-to iPad keyboard for the last few years has been Logitech's Ultrathin Keyboard Cover (go.macworld.com/ultrathin). It's lightweight, portable, has a battery that lasts forever, doubles as a screen cover when traveling, and has an adjustable viewing angle.

Despite having a preferred keyboard, I'm still eager to try new products as part of my never-ending hunt to refine and perfect the way I work on an iPad. So when Logitech announced a new Bluetooth keyboard for iOS devices, Keys-To-Go (go.macworld.com/keys), it naturally piqued my curiosity.

The \$69 keyboard is compact, covered in a spill-resistant fabric, boasts three months battery life, and most intriguingly lacks any method for connecting itself to your iPad. Up until this point, I had only ever used a keyboard that doubled as a stand, or completely enclosed my iPad in a folio-type housing, but I appreciate how Keys-To-Go lets me use any case I want—or no case at all.

THE BASICS

As with the rest of Logitech's lineup, the top row of the Keys-To-Go keyboard offers shortcut keys for common iOS tasks. With the press of a button you can return to the home screen, open Spotlight, launch Siri,



LOGITECH KEYS-TO-GO



AT A GLANCE:

Keys-to-Go is literally the keyboard that doesn't want to stay put, but it's also quiet, convenient, and just as easy to type on as Logitech's Ultrathin Keyboard Cover.

PROS:

- You can use any case.
- Great battery life.

CONS:

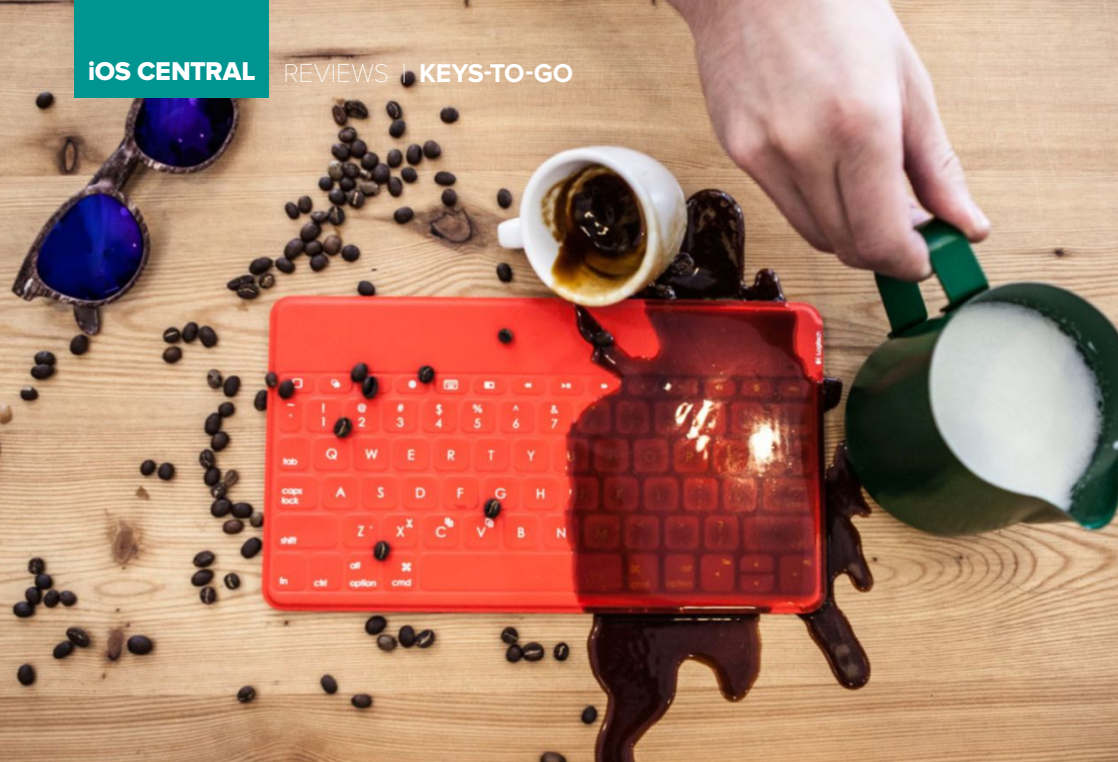
- Slides around on smooth work surfaces.

PRICE:

\$70

COMPANY:

logitech.com



activate the fast app-switching view, take a screenshot, control media playback, and adjust your iPad's volume.

In the top-right corner of the keyboard is a button with a battery icon on it. Pressing it causes the small LED to light up, indicating the current level of the keyboard's battery. I appreciate the ability to quickly identify if the keyboard needs to be charged, especially if I'm about to head to a coffee shop or on a business trip. But I desperately miss the lock key, which is normally located in the same spot on other Logitech keyboards. I'm constantly locking my iPad when I walk away from my desk, and I enjoyed having a keyboard shortcut to accomplish this. Granted, reaching up and pressing the Sleep button on my iPad takes minimal effort on my part. It's retraining my brain to quit reaching for the key and expecting the same result that's challenging.

I was able to regularly transition from my MacBook Air's keyboard to the Keys-To-Go without any major learning curve. The keyboard's overall footprint measures at just over 9 by 5 inches and 6mm tall. What does that mean to you? The outer keys such as Shift, Delete, and Return have seen the biggest reduction in overall size, with the rest of the keys remaining nearly full-size.

QUIET AS A MOUSE

Whether you work alone in a home office, or in a large office full of coworkers you've undoubtedly been annoyed by the clickity-clack of a keyboard or two. Keys-To-Go, however, makes almost no noise when someone is pounding away at the keys.

I'm not sure if it's due to the material used to cover the keyboard, or the way the keys are engineered underneath it, but this thing is astonishingly quiet. No matter how hard I would press a key, I was only ever able to elicit a subdued "click" from the keyboard. At one point my 4 year old walked over to my desk and asked if I was pretending like I was working, because he couldn't hear anything. Not only was it an adorable question, it just goes to show how loud other keyboards are in comparison.

IT LIKES TO...WIGGLE

So far so good with the Keys-To-Go keyboard—but there is one problem that's likely to drive you as crazy as it did me. When using the keyboard on a smooth surface, such as a finished wood desk or table, the keyboard moves. (I don't have a glass table, but I imagine the problem would be present there as well.) It wiggles just enough to throw off your typing, forcing you to stop and adjust the keyboard or move your hands to the correct keys. It's an ever-so-slight movement, but one that over time becomes increasingly annoying.

When resting the keyboard on my lap, or an unfinished surface, the problem vanished. I would love to see small feet added to the corners to eliminate the issue—I just might end up picking up some stick-on feet from Amazon.

BOTTOM LINE

For users of either size iPad or even an iPhone 6 Plus, the Keys-To-Go is a solid choice. Not only does it ditch the requirement to replace (or remove) the case on your device, it's lightweight, super portable, quiet, and offers a familiar typing experience. The wiggling issue I experienced on a slick surface can be easily remedied with a little ingenuity, but still, it should have been a non-issue. I haven't decided yet if it's going to replace my tried-and-true Ultrathin keyboard, but I can tell you it's giving that one a significant run for my money. ■

What's new at the App Store



FUNNY OR DIE WEATHER

Do you love looking at the forecast, but wish that checking the weather wouldn't distract from your constant stream of comedy podcasts? Funny or Die Weather (go.macworld.com/weather) mixes climate with comedy, fun with forecasting, the weather with waka-waka-waka!

Be My Eyes



This free app is for two kinds of people: Blind folks, and sighted folks who want to help them. If a blind person needs help identifying something—say, the “sell by” date on a carton of milk—they can start up a live audio-visual connection and aim the iPhone’s camera at the object they need help with. Sighted folks—volunteers who download the app—will be alerted that help is needed, open Be My Eyes (go.macworld.com/eyes) on their iPhone, and see what the camera’s aimed at. Then they can answer the blind person’s question. It’s a pretty incredible app.

Lego Movie Video Game



Everything is awesome! Everything is cool when you’re part of a team! Everything is awesome, when you’re playing the \$5 Lego Movie Video Game (go.macworld.com/lego) for iOS.

Lovely Handwritten Cards



Choose a template—some are free, some paid—from one of six categories: Holiday, Birthday, Congratulations, Love, Everyday, and Anniversary. Add your own photo, then add your handwriting—either by finger or stylus—and finally share your Lovely Handwritten Cards (go.macworld.com/lovely) via email or social networks.—JOEL MATHIS

Case, or no case?

We try out a ton of cases, but some we just keep coming back to (despite our differences in taste). Here's our favorite cases for the iPhone 6 and 6 Plus.



BALLISTIC HARD CORE TACTICAL

Developed through a partnership with Tacprogear, the Hard Core Tactical (iPhone 6; price unavailable; goballisticcase.com) is designed to shield your iPhone against the harshest conditions. Certified to withstand damage from 12-foot drops, the case sports four different layers with integrated springs, raised edges around the iPhone's display, and a scratch-resistant screen protector. No need to worry about accidentally dropping your iPhone while carrying it around—the Hard Core Tactical comes with a rugged holster manufactured to resist 200-pounds of pull strength.

CARTE BLANCHE SAC MATELASSÉ

The Sac Matelassé (iPhone 4/4S, 5/5S, 5C, 6, and 6 Plus; \$160 to \$180; carteblanche.com) is a case disguised as a handbag, with a removable cross-body strap that can be configured for different carrying positions. Made of genuine calf skin, the Sac Matelassé sports an interior main pocket where you can hold your bulkier valuables, a zip pocket for your coins and cash, and six card slots to quickly store credit cards or your photo ID. As an added bonus, your iPhone has its own dedicated compartment, where it stays out of harm's way until you need it.



Cases or no case?

CASE-MATE BRILLIANCE

The Brilliance (iPhone 6 and 6 Plus; \$80; case-mate.com) sports a unique, sparkly design, with genuine crystals laid out to create a shimmering effect. Finished with premium leather, this slim case sports two layers of protection with an interior liner for added safety, and comes with coordinated metal button covers that blend with its overall design. Needless to say, when you make a phone call, expect to attract the attention of those around you!



CYGNETT BULLDOZER

The Bulldozer (iPhone 5/5S; \$19; us.cygnett.com) features a silicone shell imprinted with bulldozer tracks—which, besides an interesting look, provides an easier grip and increased protection. This impact-resistant case provides unobstructed access to the iPhone's buttons, camera and flash, and charging port, and comes with a screen protector to help prevent scratches and smudges.



LAB.C 108

The 108 (iPhone 6; \$30; lab-c.co.kr) sports a simple, streamlined design, with a dual-layered construction built to absorb damage from shock and impact. The case features a grip bar to avoid accidental slip-outs, and, if you are tired of the same old black, comes in seven aluminum-themed colors: gold, silver, black, red, pink, mint, or blue.

MOPHIE JUICE PACK AIR

Man, were we excited when Mophie launched its Juice Pack line for the iPhone 6 and 6 Plus. The Juice Pack Air (iPhone 6; \$100; mophie.com) is a solid pick—it adds a 2750mAh battery that keeps your iPhone fully charged even during the busiest of days. Available in black, white, or gold, Mophie's cases includes a standby switch that lets you choose when to kick in the external power pack to recharge your iPhone's built-in battery, and sports rubberized support pads that provide extra impact protection while keeping a slim profile. Plus, when you charge the Juice Pack with your iPhone still in place, the external battery doesn't start charging until your iPhone's own power is fully replete, allowing you to quickly grab your iPhone and run when you don't need extra talk time.



HELP KEEP THESE KIDS IN PLAY.

**175,000 KIDS WILL BE
DIAGNOSED WITH
CANCER THIS YEAR.**

Children are our greatest hope for the future.
Let's be their greatest hope too.

Cancer strikes infants and children. For teens
and young adults, survival can depend on
treatment by a pediatric oncologist, designed
specifically for them.

The St. Baldrick's Foundation and Stand Up To
Cancer are funding groundbreaking collaborative
research to bring the most effective therapies to kids
fighting cancer. To learn how you can help keep
these kids in play, go to stbaldricks.org/inplay and
standup2cancer.org/pediatrics.

Julia Hernandez
Diagnosed at 16,
in remission.

Samuel L. Jackson
Stand Up To Cancer and
St. Baldrick's Ambassador



**St. Baldrick's
FOUNDATION**

Conquer Childhood Cancers



St. Baldrick's Foundation is a charitable 501(c)(3) organization funding childhood cancer research.
Stand Up To Cancer is a program of the Entertainment Industry Foundation, a 501(c)(3) charitable organization.

Photo by Nigel Parry

HomeKit

It's all about
simplicity

BY SUSIE OCHS



ILLUSTRATION BY
HARRY CAMPBELL



are your HomeKit appointments going? Have you seen anything cool?” I got this text (paraphrased) from two colleagues as I raced from meeting to meeting, between booths and meeting rooms and hotel suites, talking to a dozen companies about their HomeKit products and apps during CES 2015.

The truth is, I saw a lot of cool things, but not in the flashy, over-the-top, Rocketskates (go.macworld.com/rocket) sense that so many other products shoot for at CES. HomeKit has a lot going for it, from ease of use to security to deep integration with iOS. But the products themselves are refreshingly simple—you would be forgiven if you saw one, after all these months of anticipation, and said, “That’s it?”

Yeah, that’s it. And quite by design. The live demos I got mostly went something like: “You plug a lamp in here, and you can turn it on and off. You stick this sensor on your door, and you’ll know when it opens.” To the end user, it’s the furthest thing from rocket science or rocket skates—and that simplicity

11 HOMEKIT-COMPATIBLE DEVICES

The first round of products debuted at International CES, and while each is quite simple on its face, we think that’s the entire point.

Elegato

1 Elgato launched its new Eve line (go.macworld.com/eveline) of HomeKit-compatible products, including the Eve Door & Window sensor, which connects to your iPhone with Bluetooth LE and has a battery that lasts six months. Next up, the Room sensor will measure the air quality indoors can help you determine how much it’s actually helping to use an air purifier or keep your window cracked.

The Eve line will also have a plug that could turn that air purifier on for you, or just automate and track the energy consumption of whatever you plug into it. The app will let you add more HomeKit devices later, and you’ll be able to control your Elgato devices from other HomeKit apps—the secondary competition in the apps space could be just as interesting.



Setup, security, Siri

Every company I talked to mentioned the same benefits of using HomeKit, and first was the easy setup. The products use Bluetooth and/or Wi-Fi (often both), since that's what's already in your iPhone and iPad, not to mention the Wi-Fi network in your house. Previously, connected home

devices that worked with iPhone apps had to come up with their own methods of setting up the device with your iPhone—maybe the device would create its own Wi-Fi network, and you would connect to that in your iPhone's

WITH HOMEKIT, YOUR IPHONE JUST RECOGNIZES THE DEVICES—**YOU CAN EVEN ASK SIRI, “WHAT HOMEKIT DEVICES ARE NEARBY?” AND SHE CAN SNIFF THEM OUT FOR YOU.**

Settings app, then open the device's companion app, and type in the SSID and password for your home Wi-Fi network. It's a clunky dance even when it works, and when it doesn't work as planned, it's downright frustrating.

With HomeKit, your iPhone just recognizes the devices—you can even ask Siri, “What HomeKit devices are nearby?” and she can sniff them out for you. The phone shares your Wi-Fi details with the device, and thanks to iCloud Keychain, you can authorize other iPhones and iPads to control the device too without having to repeat the process.

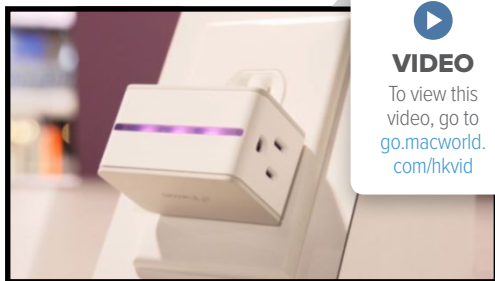
Security is another huge selling point. One company, Zendo (gozendo.com), which plans to roll out a huge array of HomeKit gear by the end of the year (from connected plugs to cameras, door/window sensors, lights, a thermostat, and more), said it would issue an open invitation to

Schlage

2 Schlage is building HomeKit support into one new lock, the Schlage Sense (ces.schlage.com), the company's first Bluetooth lock. Bluetooth and HomeKit will let your smartphone act as the key, but the lock has an illuminated touchscreen as well, so you can program no-phone-required codes for house-guests or the dog walker.

HomeKit support will let your lock recognize your phone without you having to dig it out when your hands are full of grocery bags, as well as letting Siri assure you your front door is locked before you turn in to bed at night. The Schlage Sense will be out later this year, with exact timing and pricing to be determined.





VIDEO
To view this video, go to
go.macworld.com/hkvid

Senior Editor Susie Ochs reports on the latest HomeKit devices.

hackers to try to break in, both because the company is confident in the security Apple has baked in to the HomeKit framework, and of course to fix any vulnerabilities as soon as they're discovered. Reps from Schlage (which makes door locks) and Chamberlain (garage door openers) expressed the same confidence in HomeKit's security, and security is paramount for their products since they provide access to your house. Just keep in mind that since HomeKit uses iCloud Keychain, that keeping your iCloud password and recovery code absolutely secure will be more important than ever.

Siri integration is one of HomeKit's game-changing features. Almost every connected home device already works with one (or more!) iOS apps, but if you have to unlock your phone with a passcode and then find and open the app, that can take quite a few swipes and taps before you're able to control the device. Using Siri is a lot faster—and if your phone is plugged in, you can even say, “Hey Siri!” to give a command. HomeKit products with built-in microphones can even pass voice commands to Siri over the network, so you don't even have to be in the same room.

iDevices

3 You might know iDevices (idevicesinc.com) for its Bluetooth cooking gadgets. Now the company is betting on HomeKit in a big way, with a \$10 million investment leading to its first in a series of products, the Switch (go.macworld.com/switch). This is a small connected plug that doesn't hog the second power outlet and also sports a color-changing LED strip that acts as a night light. The Switch will let you use Siri or HomeKit apps to control lights, fans, air purifiers, anything with that kind of mechanical on/off switch.



Each Switch has Bluetooth LE as well as Wi-Fi, so you can connect to it via iDevice's cloud to check in while you're away from home, and the company's well-designed HomeKit app will work with other devices too, like locks from Schlage, MyQ garage door openers from Chamberlain, and the Lyric thermostat from Honeywell. The Switch is shipping in April, for \$50.

Letting companies play to their strengths

Those benefits of HomeKit—setup, security, and Siri—were emphasized over and over in my meetings, but they aren't the whole story. The HomeKit devices I saw look simple because they are simple. Each one can focus on solving a particular problem, letting consumers like you and me piece together a system that fits their unique situation, while letting the companies focus on what they do best.

Since Apple provides the HomeKit framework (go.macworld.com/homekit)

THE HOMEKIT
DEVICES I SAW
**LOOK SIMPLE
BECAUSE THEY
ARE SIMPLE.**

to securely connect the gadgets to iOS devices, and to allow that deep iOS integration and Siri control, developers and manufacturers don't have to roll

their own solutions for those functions. A company like Schlage, which has been making locks for 95 years, can focus on making its upcoming Schlage Sense a really great lock, not on finding a way to build in voice control.

Products are certified through Apple's Made for iPhone program (go.macworld.com/made), and more than one company mentioned how helpful that collaboration has been as well. Of course, no one wants to be named on the record talking about working with Apple, which I can respect, and I did also hear a few developers say they're looking forward to more functions being added to the spec, like proximity triggers—but they like what's here so far, and more features will roll out over time.

And it's not just manufacturers of

iHome



4 iHome's (ihomeaudio.com) first HomeKit device is a Wi-Fi connected plug. The iSP5 SmartPlug (go.macworld.com/smartplug) is stackable—you can fit two onto a standard power outlet. You can plug devices like lamps, fans, or portable heaters into the Plug, and turn them on and off in iHome's app. The app makes it easy to name each device, group them by room, and set up scheduling and scenes that run with one tap in the app, or by asking Siri. The product will hit stores in the second quarter of 2015 with a tentative price of \$39.

Blue Maestro

5 The Tempo Environment Monitor (go.macworld.com/monitor) is a battery-powered indoor/outdoor sensor that monitors temperature, humidity, and barometric pressure. It's iBeacon mode sends out a constant ping, and can trigger actions in nearby Bluetooth devices running iBeacon apps. HomeKit's spec doesn't support Tempo's sensors just yet, but its maker Blue Maestro (bluemaestro.com) hopes down the road to use the HomeKit framework to let Tempo's sensor data trigger actions like turning on an air purifier or fan.

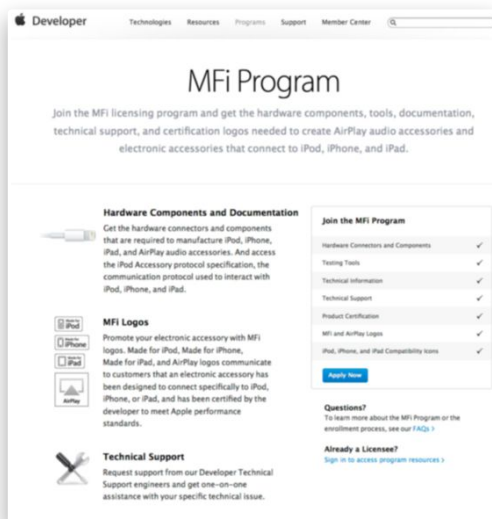


gadgets who can use HomeKit. Since HomeKit apps can be written to communicate with any HomeKit-compatible accessory, so developers can design beautiful software if that's their strength, and never create any hardware themselves at all. Zendo is creating its own hardware, but told me the app is just as important to them, and it'll be free to consumers to control whatever HomeKit devices they want, even if they never buy a single gadget from Zendo. If the app can deliver a great experience, the idea is people will want to explore the rest of Zendo's offerings. Ideally, you'll be able to find your favorite HomeKit app and use that (or Siri) for everything—no more jumping from app to app to communicate with different devices around your



Withings

6 The Withings Home (go. macworld.com/withings) camera joins the crowded IP camera space with a few cool features: HomeKit support; environmental sensors to detect volatile organic compounds, or VOCs; and the easy-to-use timeline feature in its app, including an automatic time-lapse of the last 12 hours. The app strives to give you real advice based on the sensor's data. In our demo, waving freshly poured hand sanitizer near the camera immediately changed the air quality readout in the app from Good to Bad, and sent an alert to open a window. The 5-megapixel, 135-degree camera is about the size of a scented candle and looks somewhat decorative in its bamboo-and-white shell. It detects motion now, with people detection coming later, via firmware update. Withings Home is available for \$200.



PRODUCTS ARE CERTIFIED through Apple's Made for iPhone program.

HOMEKIT AT ITS BEST WILL ALLOW DEVICE MANUFACTURERS TO **ADD EXTRA FEATURES AND VALUE TO THEIR PRODUCTS** TO APPEAL TO iOS USERS, WITHOUT HAVING TO REINVENT THE WHEEL EACH TIME.

hardware quality will help mainstream connected home devices for people who might want to start smaller and more cheaply than a \$250 Nest (go.macworld.com/nestlabs) or a \$200 Dropcam (go.macworld.com/dropcam)—which are both terrific, but will likely never work with Siri.

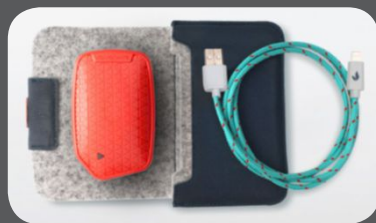
HomeKit at its best will allow device manufacturers to add extra features and value to their products to appeal to iOS users, without having to reinvent the wheel each time. And as people start to use these products, the companies will get invaluable feedback about how their customers are using them, which can inform future iterations.

Chamberlain, for example, makes garage door openers, which is something you might buy every 15 or 20 years at the least—but add Bluetooth and an app and suddenly the company has a chance to connect with you every day, instead

house. Apple could surprise everyone with a Passbook-ish app to serve as a gathering place for everything HomeKit, but I don't think it needs to.

What's next

It's still early days. As devices start to hit the market, I think the focus on ease of use and Made-for-iPhone



Velvetwire

7 Velvetwire (web.velvetwire.com) already makes the best iPhone charger in the business, the Powerslayer, and at CES debuted the next-gen Powerslayer Blu. This adds Bluetooth and an app, so you can get a notification on your iPhone when your iPad is done charging, or you can set a goal for charging (say, you want to be at 45 percent before you leave the house), and hear a chime when it gets there. You can even get a notification when your phone and the Powerslayer lose their connection, which can help you avoid leaving it behind in hotel rooms. More features to come later include the ability to evaluate the health of your iPhone or iPad's battery, and even put it through battery calisthenics to keep it in tip-top condition. Powerslayer Blu will be out this month, with an anticipated price of around \$79.



of just once every 15 years. If Chamberlain can find out that HomeKit users are pairing their smart garage door openers with another company's camera because they want not just the ability to open the garage door, but also to see who's coming and going and when, that can influence future products and app development so eventually you don't need a camera to produce the same result. Of course, users should be able to

opt-in for what kinds of data is shared, but what Chamberlain described seems like it follow's Apple's philosophy for collecting user data—to get only enough to let the products work and for the company to

keep making those products better, but not to sell the data or build profiles of individual users to market to them later.

I'm as excited about the possibilities as I am full of questions: Will the Apple TV get stronger Bluetooth and Siri soon, and maybe a HomeKit interface for the biggest screen in your house? Will macros be as easy to set up as they are to run? (Logitech, for example, still hasn't nailed macro setup (go.macworld.com/macro) for the Harmony series of smart remotes.) Keep your eyes on *Macworld*, because the HomeKit story is just beginning.

WILL THE APPLE TV GET STRONGER BLUETOOTH AND SIRI SOON, AND MAYBE A HOMEKIT INTERFACE FOR THE BIGGEST SCREEN IN YOUR HOUSE?



Chamberlain

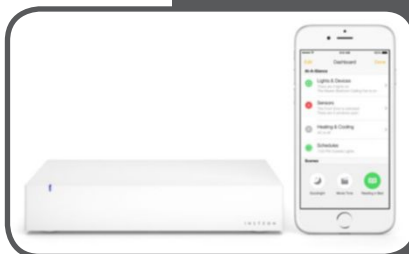
8 Chamberlain knows you're probably not going to run out and buy a new garage door opener just so you can use it with your phone instead of the little remote control you already own. So its new top-of-the-line Wi-Fi Garage Door Opener with

MyQ (MyQ Garage kit \$130 go.macworld.com/myq) can add app-controlled connectivity—including HomeKit support—to the garage door opener you already have. Simply install a small Wi-Fi hub and a door sensor, and you can check the garage door—and close it—from anywhere.

Insteon

9 Announced at CES, the \$150 Insteon Hub (go.macworld.com/insteon) brings HomeKit support to existing Insteon products, bridging Insteon's own communications protocol with Bluetooth and Wi-Fi. HomeKit allows access from outside the house, with the Apple TV providing a secure gateway for connections from HomeKit-compatible apps, like the

company's own Insteon App, which will allow control of any HomeKit-compatible device. The Hub is available now.



Building an Apple-powered smart home?

According to *9to5Mac's* (go.macworld.com/9to5mac) sources non-MFi devices won't have the same capabilities as products built with HomeKit in mind. Here's how they'll reportedly work:

- >> Any HomeKit device with the MFi logo can connect directly to the phone over Wi-Fi or Bluetooth, and will have full HomeKit capabilities, including remote control through Siri.
- >> Bluetooth LE devices can only connect to HomeKit through a bridge if they don't actually control the home. While you can use non-MFi motion sensors to trigger other HomeKit devices around the house, you can't control your non-MFi light bulbs with Siri.
- >> Wi-Fi devices that don't bear the MFi logo won't get to connect with HomeKit using a bridge device. Nest, for instance, would have to get MFi certification to allow direct Siri controls.
- >> Devices that use alternative networking protocols such as ZigBee or Z-Wave can connect to HomeKit through the use of an MFi-certified bridge device.

A device that doesn't work with HomeKit isn't useless; it just means you can't control it in a unified manner with your HomeKit devices using Siri.

WHY THIS MATTERS

Simplicity and security present major obstacles to smart home acceptance. As *9to5Mac* points out, Apple won't allow bridged devices to trigger door locks or other products that provide physical access to the house, possibly because they represent a weak spot in smart home networks. Bridges also add complexity, so it's no surprise that Apple is looking to discourage their use and steer people toward simpler Wi-Fi and Bluetooth-based setups. —JARED NEWMAN

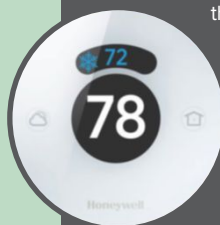
Incipio

10 The Incipio Direct Wireless Smart Outlet (go.macworld.com/smart1) for plugging things in, and the Smart Lamp Adapter (go.macworld.com/smart2) for making dumb lightbulbs smart, each sell for \$25. A four-port Power Strip (go.macworld.com/smart3) sells for \$60. All will work with the Incipio Direct app for iOS, which allows grouping of devices, one-touch scenes, and proximity awareness. The devices are expected in Q2 of 2015.



Honeywell

11 The Lyric thermostat (lyric.honeywell.com), which debuted last year, is getting HomeKit support—including control from the Apple Watch. A Honeywell spokesperson says Apple Watch-using Lyric owners will be able to get a real-time snapshot of their home system with Glances, and the Watch's geofencing feature will let you engage Out of Town mode with one tap when the Watch leaves range of your home network. The Lyric thermostat is on sale now, and the Apple Watch is expected to be released this spring, probably sometime in March. ■



How the MacBook Air could change everything (again)



While the rest of the world was busy focusing on CES, one intrepid journalist uncovered a product that may bring big changes to Apple's computers.

By Michael Simon

11- and 13-inch
MacBook Airs.



While the rest of his peers were

knee-deep in selfie drones, wearables, and smart washers at CES, Mark Gurman of *9to5mac* (go.macworld.com/9to5) published a scoop that trumped anything to come out of the Las Vegas Convention Center. Apple intended to release a 12-inch MacBook Air (go.macworld.com/air) sometime in 2015. Ho-hum, right? Maybe not.

It's not just that he reported about an unreleased Apple product that no one had an inkling of (though that surely helped). Gurman's report garnered so much attention because it described a laptop so intriguing it was practically unbelievable: a MacBook Air so thin and light that it had only two ports, and neither of them were dedicated to supplying power.

In the renderings it seems like a fantastical concept, something we would ooh and aah over on *Dribbble* but ultimately disregard due to practicality and realism. But Gurman supplies enough solid information to make the report believable (and his solid track record doesn't hurt). And when you break it down, it's not all that crazy.

History repeats itself

Apple will forever be remembered for the Mac, iPod, iPhone, iPad, and whatever its next revolutionary product may be. (Apple Watch anyone?) But what history won't remember quite as well are the little risks Apple took that helped pave the way for these products. Had Gurman published a report in January 1998 about Apple working on a blue, all-in-one machine with no floppy drive or serial port, it would have been met with a fair amount of skepticism. Looking back, it seems

obvious, but at the time of the original iMac's introduction, it was a radical departure from what people expected from a personal computer (and that's to say nothing of its circular mouse). CD-Rs had yet to really take off and the thought of giving up 3.5-inch floppy disks was a frightening notion, despite the obvious benefits. But Apple saw the future and dragged us into it.

The same is true of the original MacBook Air. To look at it was to want one, but much like the iMac, the

...what history won't remember quite as well are the little risks Apple took that helped pave the way for these products.

YOU MAY RECALL this little risk that Apple took, once upon a time.





stunning design came at a hefty price for anyone who wanted a built-in optical drive, FireWire, or gigabit ethernet (none of which were to be found on this laptop). But no matter, it set the tone for a whole new generation of laptops, and now everything out there looks and acts a whole lot like the original Air. And it's no coincidence that CDs are going the way of the dodo.

Rarely, if ever, has Apple guessed wrong when it comes to soon-to-be-obsolete technology. It reads the writing on the wall like no other company can and has set the tone for the industry since the early days of the Mac. So if this new MacBook is real, you can bet Apple is already looking much further down the road.

Rarely, if ever, has Apple guessed wrong when it comes to soon-to-be-obsolete technology.

Head in the clouds

Apple has been relatively slow to embrace the cloud as much more than a background saving and syncing solution, but iOS 8 and Yosemite have laid the groundwork for a major iCloud transition. There's iCloud Drive, which finally allows some access to our online files; iCloud Photo Library for keeping track of every picture you snap; and the orderly convenience of Family Sharing (when it eventually works as intended), not to mention a new palatable pricing scheme.

We could very well be seeing Apple's answer to the Chromebook. There has already been speculation that the new machine portends Apple's long-awaited entrance into the budget-PC market, and while I highly doubt we're going to see a \$199 MacBook anytime soon, an iPad-esque \$499 model with a 16GB hard drive isn't all that crazy of a notion. While internet-dependent machines may still be something of a niche product, it's one that's growing fast, particularly in the education sector.

Just a few short years ago, the

iPad was primed to take over the classroom, but the post-PC has been slow to catch on. Growth of the tablet market has significantly slowed over the past 12 months and schools in particular have begun looking for cheaper alternatives. Apple has already lost a massive \$1.3 billion deal with the Los Angeles Unified School District that would have provided an iPad for every student, and I'm thinking this isn't a market segment where the company wants to lose any more ground.

Tim Cook may have called slowing iPad sales a "speed bump," but the fact is that people aren't quite ready to abandon their PCs. High-end Mac sales are stronger than ever, and the iPad hasn't quite taken over the low-end of the market like Apple

thought it would. Apple doesn't usually compete in the shallow profit-end of the pool, but remember, the MacBook Air already sells for half of its original \$1,799 price. With iCloud, a small hard drive and a two-port design, this new MacBook might give Apple an opportunity to go even lower.

One port to rule them all

Based on Gurman's description and *9to5Mac's* renderings, expansion is clearly going to be an issue. With a headphone jack and a sole USB-C port, many devices are going to be competing for its attention, especially if it's plugged into an outlet. But much like the MacBook Air introduced



Apple doesn't usually compete in the shallow profit-end of the pool, but remember, the MacBook Air already sells for half of its original \$1,799 price.



Remote Disk to solve the problem of needing to plug in an external Super-Drive every time you wanted to transfer a file or install a new program, I'm sure Apple is already thinking of innovative ways to handle this.

The good news is that USB-C is backwards-compatible with USB 2 and 3, so the vast majority of devices will work fine with an adapter, which Apple is sure to provide... er, sell... just as it does with the Air's USB Ethernet adapter. But dongles aren't pretty, and if the goal of this machine is to be nearly-wireless, there's another path that Apple could take: magnets.

MagSafe already makes use of magnets from a quick-release stand-point on the rest of the MacBook line and Apple Watch, but if this new notebook shuns the traditional power cable, the time may be ripe for a whole new standard. Intel and the Alliance for Wireless Power have already shown off their Rezence (rezence.com) wireless charging technology, and its

If Gurman's right, Tim Cook is about to serve up a giant reminder.

capabilities are pretty mind-blowing.

Of course, a USB-C charging cord would still be necessary for travel. However, a wireless charging pad that keeps your MacBook juiced up while at your desk would not only be a major selling point, it would pave the way for the next generation of iOS products that don't need to be plugged in quite so often.

But most of all, it's a reason to get excited about the Mac again. Mac Pros and retina 5K iMacs aside, there's so much attention slathered on the iPhone and iPad that we can sometimes forget that Apple is still a world-class computer maker. If Gurman's right, Tim Cook is about to serve up a giant reminder. ■



A second number turns your device into a business phone

Services like Cloud Phone, ZipZap, and Line2 let you manage a second business line on the device you're already using.

BY JASON CIPRIANI

When you own a small business, the temptation is natural to hand over a business card with your personal cell number plastered on it. You're merely offering a direct line to the person who can make decisions. Accessibility is a key selling point when touting the advantages of your business over larger corporations.

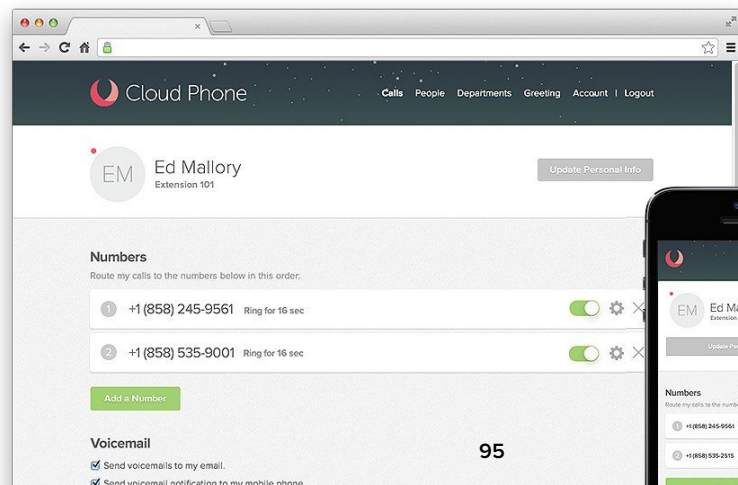
But you can oversell your accessibility—and the end result is interrupted dinners, missed birthday parties, and alarming calls at 2 in the morning. Customers want what they want, when they want it. These interruptions might be good for business, but they're bad for personal health and relationships.

Carrying around a second phone to separate business from work is inconvenient and expensive. What about taking advantage of the devices you're already carrying? The proliferation of apps offering virtual phone

numbers has made it entirely possible to manage a secondary business line from your iOS device. Google Voice and Skype are respectable choices, but they aren't the only options—I found three other services that might fit your own use case a little better.

CLOUD PHONE

Cloud Phone (go.macworld.com/cloudphone) is a business solution from the same people behind the consumer messaging app Voxox (go.macworld.com/voxox). Cloud Phone offers an online portal for managing



CLOUD PHONE is entirely web-based, and you can complete your calls using any old phone that's around.

**iPAD-ONLY ZIPZAP**

has a funky design, but using it is fluid once you get the hang of it.

your account, setting up an auto attendant (that's the computer voice you hear when calling companies), screening incoming calls, and even receiving faxes.

Cloud Phone's biggest caveat is that it lacks a mobile app. All account management is done through its website, and that, confusingly, includes placing a call. You have to type in the number you want to call and the number of a phone near you. In turn, the service calls your number and asks you to press 1 to complete the the call to the other party. Receiving a call isn't as messy, and the incoming number shows up on your personal phone as any other incoming call would. Clearly, Cloud Phone is a service for those who plan on

receiving far more calls than they'll ever make.

Pricing starts at \$10 a month for two extensions and 1,000 minutes. It tops out at 10 users and 5,000 minutes for \$25 a month. A 30-day trial lets you put the system through its paces before making any commitments.

ZIPZAP

For those wanting access a similar service through an app, there's ZipZap (go.macworld.com/zipzap), although the app is currently iPad-only. The app reminds me of the classic photo displaying a switch-board operator managing random cords. Only instead of cords, you have these circular icons containing pertinent information for the person

on the other end of the line. When you want to answer a call, just drag the icon into the middle of your iPad's screen and start talking. The interface is a bit puzzling at first, yet after completing a few calls and sending some messages, it begins to make sense.

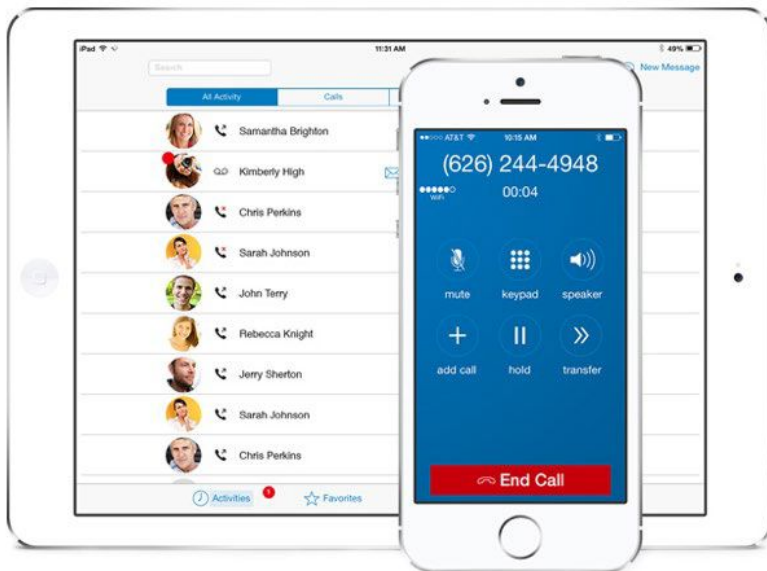
ZipZap is aimed at people who take a lot of calls, sometimes concurrently. One feature I wasn't able to test in ZipZap was the ability to manage 10 calls at the same time—who does that?! Perhaps the best part is the ability to walk away from your iPad (or turn it off) and not have to worry about your smartphone ringing, as you would with other services. But you can always set up a

forwarding number if you're worried about missing calls.

For \$25 a month (paid yearly) you get one phone number with unlimited voice minutes and text messaging. If you prefer to pay on a monthly basis, the cost jumps to \$30 a month. The free 30-day trial doesn't require a credit card.

LINE2

Line2's (go.macworld.com/line2) key feature is that it's cross-platform: the company offers an app for iOS and Mac, in addition to Android and Windows. Line2's Personal service, for \$10 a month, is geared towards someone who doesn't need an unlimited voice plan or extra features



LINE2 LETS YOU
use one account
on all your
devices: Mac, PC,
Android, and iOS.

like auto-attendant or a toll-free number. In addition to its allotment of 5,000 outbound minute allotment, you get unlimited text messaging and inbound calls and access via any Line2 app.

For \$15 a month, the Business plan gives you those same features along with auto-attendant, after-hours call handling, call forwarding, and a few other extras. (Both plans have a free 7-day trial.) The iPhone app you use with either plan is great, since it doesn't connect to your phone's Messages and Phone apps. it truly keeps your work conversations separate from your personal life.

I've yet to find a single solution that's as seamless to use as the

THE IPHONE APP YOU USE WITH EITHER PLAN IS GREAT —SINCE IT DOESN'T CONNECT TO YOUR PHONE'S MESSAGES AND PHONE APPS...

phone number already attached to my iPhone, but some of them are very close—and I appreciate how they all eliminate the need for a second device. If you're looking to experiment with a second phone number—even just temporarily, like a throwaway number for selling your couch on Craigslist—you can always try Burner (go.macworld.com/burner), which offers pay-as-you-go credits. ■



Protect your data's final mile using a VPN

Data transit is your greatest security risk. Here's and why you should use a VPN.

BY GLENN FLEISHMAN

Your greatest security and privacy risk relates to data in transit, as it passes to and from your devices. In a coffee shop, airport, or other public space using Wi-Fi, your information passes in the clear between your hardware and the network's hub. You may not be sure how and whether the hotspot secures access to the wired side of its routers, either.

Even if you're using a secure Wi-Fi network at home, work, or school—or even wired Ethernet—your bits still pass across a broadband modem and through intermediate points on the Internet before reaching the destination server and vice-versa. (Cellular networks are generally considered quite secure unless you are being either individually targeted or swept into a government-backed interception project.)

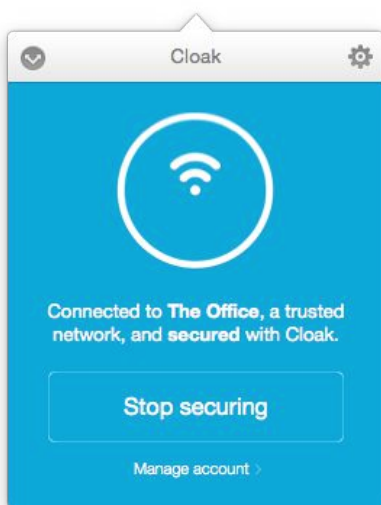
While most email servers offer secure connections, not all do and you might never have reconfigured your client to protect those sessions. (If not, you should!) Plain old FTP—not SFTP or FTP over SSL/TLS—sends a password in the clear, as well as all data. While financial, medical, e-commerce, and social-networking sites encrypt all or nearly all their Web sessions, most other sites don't, leaving your behavior open to outside inspection.

Imagine the Internet as a series of pipes—seriously. And then imagine that you could thread your own thin,

flexible, impenetrable stainless-steel pipe from your house through all the water mains to where the water comes. That's a virtual private network (VPN). It's a secure end-to-end tunnel between your device and some far-off destination.

HOW A VPN WORKS

A VPN has two termination points, more or less like a secure connec-



CLOAK'S NO-NONSENSE friendly dialog makes it clear your Mac is connected—and your traffic is secure.

tion to a website. One end is a VPN client on a piece of hardware under your control. The other is at a VPN server. Typically, when setting up the connection, you have a mechanism that lets you verify that the right security credentials are in place, which prevents a party from inserting itself between you and the server.

Data traveling in the tunnel is encrypted and decrypted at each end. With proper, modern techniques, VPN traffic is essentially uncrackable. There are weaknesses, either accidental as with Microsoft's early PPTP standard, or intentional, as with the NSA's hidden efforts to reduce the quality of modern VPN standards. But these typically only affect you if you're individually targeted by criminals or a government.

VPNs date back decades, and Apple natively supported standard VPN methods from early versions of Mac OS X and added robust support by iOS 5. They were originally deployed by corporations to allow remote workers a kind of safe extension of the security policies and firewall of the enterprise network everywhere they roamed. In many cases, the client software was free (built into Mac OS X, for instance), but the hardware required to run server software was the deterrent.

TYPICALLY, WHEN SETTING UP THE CONNECTION, YOU HAVE A MECHANISM THAT LETS YOU VERIFY THAT THE RIGHT SECURITY CREDENTIALS ARE IN PLACE...



This led to VPNs for hire, sometimes bundled into subscriptions to hotspot networks, where any individual could gain robust security. These often involved manual, tweaky configuration. You would have to enter a variety of details, and if any of them changed, you'd need to be alerted or check a website, and then reconfigure. It's much easier today, so much so that those of you who thought the complexity was too annoying to manage, should revisit.

These sorts of VPNs aren't designed to protect you from government intrusion, malware, or large-scale criminal enterprises that target website vulnerabilities. Rather, they're exclusively meant to secure

TUNNELBEAR HAS an old-timey frame for information about your Mac's active connection.

the final mile: the most vulnerable piece of the path from you to your destination. Instead of terminating their servers inside a corporate firewall, they locate their systems in highly secure data centers. In fact, your path from them to Google, Facebook, and the like is very possibly over Ethernet within the same building or in one close by.

EASY-TO-USE OPTIONS

I looked at two popular VPN services that have native OS X and iOS clients, and offer a single subscription to use both platforms: Cloak (getcloak.com) and TunnelBear (tunnelbear.com). TunnelBear also supports Windows and Android. Both work under iOS 7 and 8 and OS X 10.9 and 10.10. TunnelBear reaches back through the mists of time to OS X 10.6.8 as well.

The two services try to remove as much complexity as possible, which means eliminating manual configuration both in iOS and OS X. OS X is simpler, because Apple doesn't restrict access to the network innards required to set things up. In iOS, both companies use profiles, which let them (with your explicit permission) install their configuration details directly. You can then use their software to enable and disable connections, or use the iOS VPN controls in Settings → VPN.

The main difference between the

TUNNELBEAR IN OS X LETS YOU TARGET SPECIFIC WEBSITES FOR VPN USE AND HAS SOME PRIVACY FEATURES THAT DISABLE SOME POPULAR FORMS OF USER TRACKING.

two is that TunnelBear has friendly bear illustrations and animations, while Cloak is a bit more business-like in appearance, if also friendly. TunnelBear in OS X lets you target specific websites for VPN use and has some privacy features that disable some popular forms of user tracking. Cloak (which Dan Moren reviewed here: go.macworld.com/cloakrev) lets you pick trusted Wi-Fi



AFTER INSTALLING

iOS profiles, you can enable or disable Cloak and TunnelBear in Settings as well as through their native apps.

networks to bypass enabling a VPN, and opt to automatically connect on all others. The deciding factor might be your particular number of devices, data usage, and interest in bears.

Cloak sells time-limited passes as iOS in-app purchases, and passes and recurring subscriptions from its website. Every account may be used with an unlimited numbers of devices by a single person across iOS and Mac OS X. The fees range from \$4 for a week to \$100 per year for nonrecurring passes, all with unlimited data. A monthly subscription costs \$3 with 5GB of data included, and an unlimited monthly and yearly plan are \$10 and \$100, respectively. Cloak offers a free 30-day trial.

TunnelBear has a slightly different approach. In iOS, you can purchase nonrecurring passes that work only in iOS, not across platforms, from \$3 (one month) to \$30 (one year) with unlimited data. Via the website, you can sign up for a free plan that includes 500MB per month, or for unlimited data across up to three devices for \$5 per month (recurring) or \$50 per year (either recurring or for a single year).

The fees might seem high, but every VPN service is paying not just for servers and the overhead of staff and the like, but the bandwidth you consume: Every gigabyte you send



CLOAK CAN bypass automatically starting up a VPN network on Wi-Fi networks you mark as trusted.

through a VPN is one gigabyte inbound (which is often cheap or free) and one gigabyte outbound (about 5 to 10 cents per GB). Some users will consume 50GB a month; others a trickle.

There's one more trick up the sleeve of VPNs: They can let you seem to be accessing a service from a country other than the one in which you currently occupy. This is useful to evade certain per-country licensing limitations on free and subscription online streaming and

other services. Simply select a destination country in TunnelBear or Cloak, and when you connect, your VPN connects to a server at a data center in one of those lands.

The ethics of such work arounds can be problematic, but VPNs are so popular that Netflix reportedly has tens of millions of subscribers who live outside of regions in which they offer their paid streaming service. In that case, one is skirting licensing rules. More iffy is, perhaps, using BBC's iPlayer, which streams programs free to UK residents who pay television licenses and taxes used to subsidi-

dize production. Eventually, all national licensing barriers will have to fall because of such absurdities, but consult your internal ethical compass.

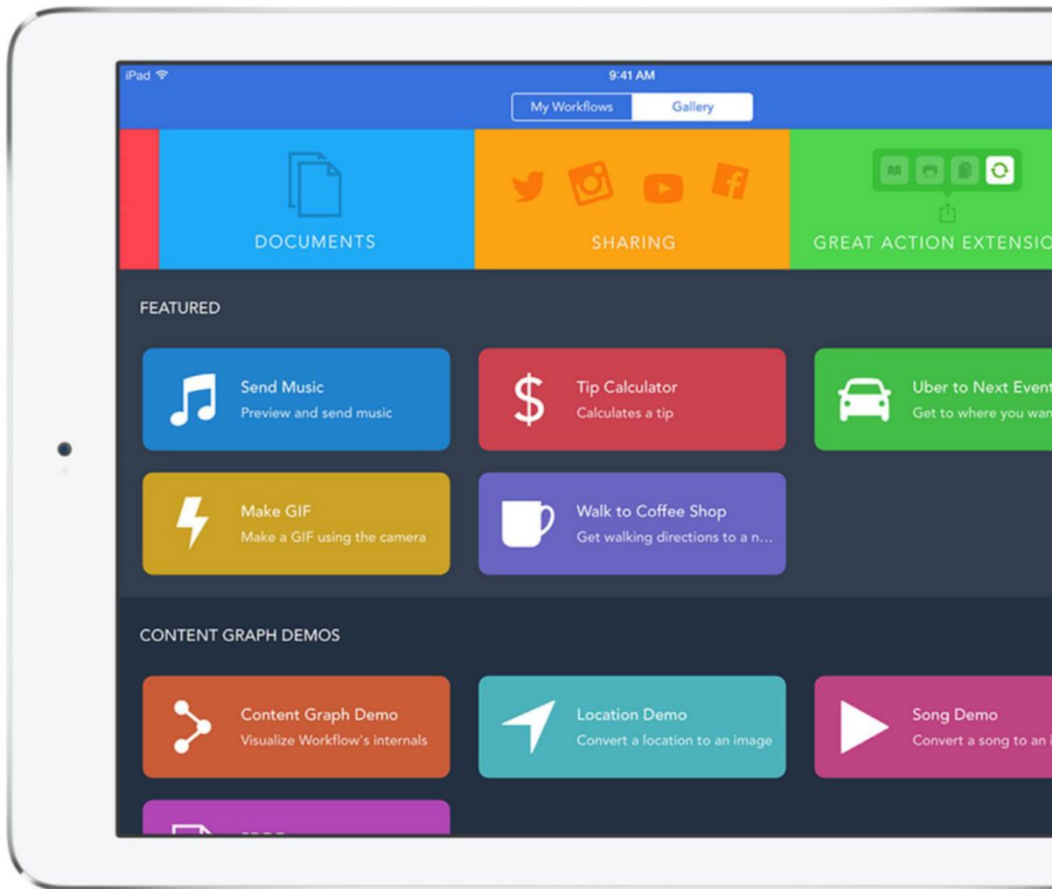
THE BOTTOMLINE

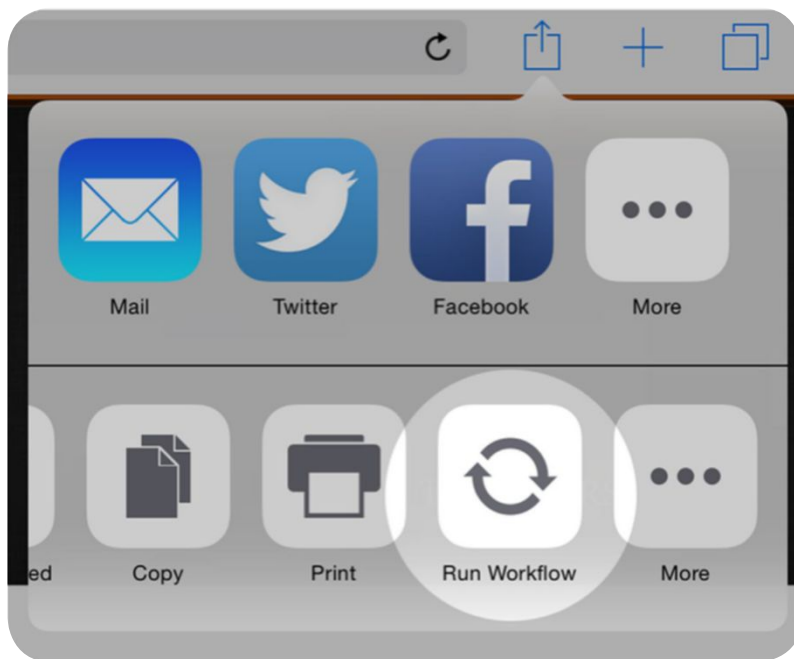
While the amount of stuff you need to protect has shrunk enormously in the last few years, with Facebook and Twitter encrypting by default, and Google and others upping their game, a VPN still buys you peace of mind. No matter what a website or other service does, you've locked down the part of the Internet you can't control happening physically around or near you. ■

Put Workflow to work with these ten ‘flow functions

The Workflow app brings a lot of automation power to your iOS device. We review 10 of our favorite ‘flows.

BY JASON CIPRIANI





DeskConnect's Workflow (go.macworld.com/workflow) is a relatively new app that's a bit like Automator for iOS. I like it, but I'm still figuring out how to put it to best use as a productivity tool. While it's had a spot on my home screen since it was first released, I've used it largely to create animated GIFs and for other "fun" features.

Now that I've been able to dig into the app some more—and spent countless hours (not an exaggeration) combing through Workflows posted on Twitter (go.macworld.com/wflwposts) by fellow users—I've found some handy 'flows I think we can all benefit from.

If you have Workflow installed on your iOS device, use it to view this post and tap on the name of the workflow (in blue) to install each one.

File Downloader Safari lets you download files, but let's be honest, it's a horrible experience. Tapping on

a link to download a file results in you just sitting there, staring at Safari, waiting for it to show signs of life and then, out of nowhere, it randomly presents the option to open the file in another app. There isn't a progress bar to be found; the entire process is very un-Apple-like.

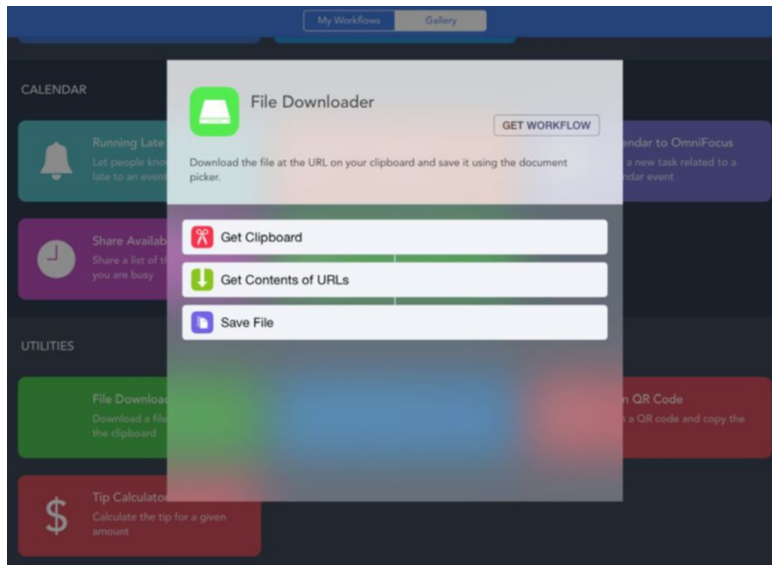
With this workflow, you can download a file of any type and save it to any service that integrates with iOS 8's iCloud Drive file picker (Google Drive and Dropbox, for example). Best of all, there's a progress bar. Just be patient, as you can't leave the app while the file is downloading.

AirDrop Screenshot Capturing a quick screenshot and sharing it to

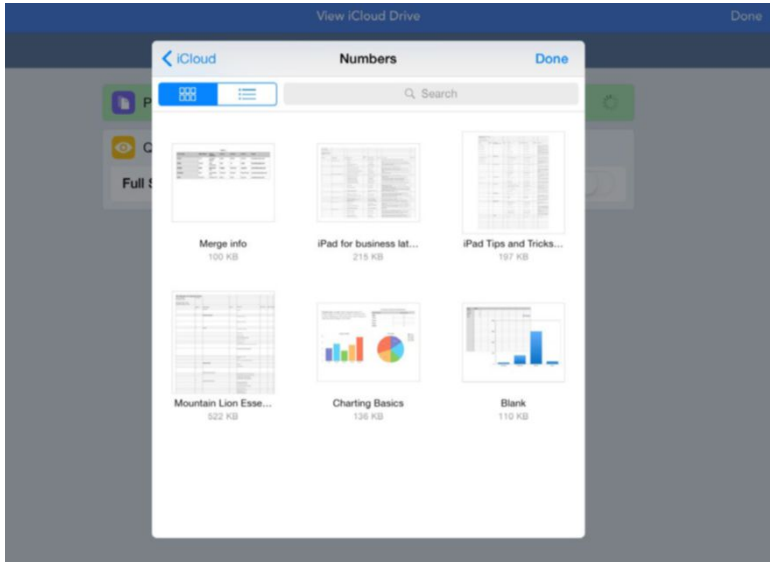
another device I own or with someone in my office is something I routinely do (as, I'm sure, do many others). The process isn't time consuming, but it can feel like a chore if you're required to do it over and over.

With this workflow you only need to tap an app icon on your home screen and select the person you want the screenshot(s) sent to. The 'flow will automatically select the last screenshot in your Camera Roll (you can change the number or have it prompt you each time it's run), and launch the standard iOS share sheet. It's nothing fancy, but it saves you some time over the long run.

View iCloud Drive The inability to browse your entire iCloud Drive



FILE DOWNLOADER is an easier way to get files onto your iOS device.

**VIEW iCLOUD**

Drive lets you see the files you've stored on Apple's cloud.

account from an iOS device is puzzling. As it is now, you need to launch an app that integrates iCloud Drive and then view your files. Depending on the app and file type, this can lead to a lot of bouncing around between apps.

With this workflow, you can view your iCloud Drive in its entirety from your home screen. And, if you find what you're looking for, you can then download and open an item in the appropriate app.

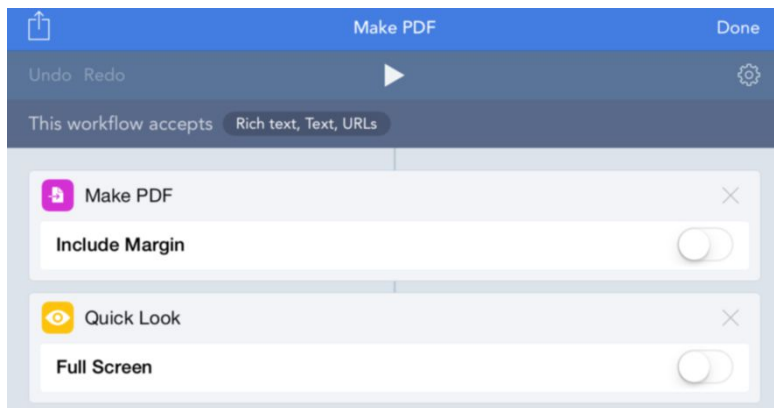
Get Images from Page You never know when inspiration is going to strike, but when it does you want to be able to quickly take note of it and move on. For me, I often find myself saving images embedded in stories and creating notes so I'll remember

something at a later time.

Prior to this workflow, the process for saving multiple images from a web page was simple, but it wasn't quick. After adding this 'flow to your library, you can use the share button to run the workflow and then save any and all images displayed within the extension.

Resize Image There are quite a few quality photo editing apps on iOS. Yet the process of opening an app, importing a photo, resizing it, and then exporting it back to your Camera Roll is so 2014. This year, when using an iOS device, I plan to exclusively resize photos with Workflow.

Once you open the workflow, you can select the photo(s) you'd like to resize and then enter new dimen-



CREATE A PDF file in a jiffy with this workflow.

sions. Or, if you always resize photos to the same dimensions, you can edit the actions with a hard-coded size (instead of being prompted every time it runs).

After the image is resized, it will be saved to your photo library and displayed for your viewing pleasure.

Make PDF Creating a PDF is a hassle, no matter the platform. This quick workflow can turn any web page or text document with a share button into a PDF in just a few seconds. Once the PDF is created, you can then upload it to a storage service, email it, iMessage it, or send it to another app for further processing.

Speak Text of Page When I was little I loved being read to, and now that I'm a grown up why should it stop? Well, finding someone willing to read me tech articles is a futile effort. But thanks to this workflow, found in the official gallery, I can have my iOS device read any web

page to me.

Site Specific Search While researching a topic, it can be downright frustrating to come up empty-handed when you know a post or report was published on a specific site. Adding to the frustration, most sites' search engines do a horrible job of finding relevant content.

As you may know, Google offers a method for restricting your query to a specific website. For the unfamiliar, you can enter "site:Macworld.com search query" (replacing search query with your respective, well, query).

This workflow will take the site you're currently searching and run it through Google. You only need to activate it through the Share extension.

Where Next? When traveling or bouncing from one meeting to the next, it can be a circus act to stay on schedule. The problem is only amplified if you have no idea where you're going or how to get there.

This workflow asks you which scheduled appointment you're heading to and then opens Apple or Google Maps to give you directions.

Share Availability Going through your schedule, trying to decipher the various color-coded bars in an effort to provide someone with a list of your availability on a given day isn't fun. The next time someone asks you for your availability, launch this workflow from your home screen and let the app create a list of the times you're available. You can then email the list or share it however you like.

AND SO MUCH MORE

Workflow is capable of plenty more, and that's what makes the app so exciting to use. With each passing day a Twitter search, app update, or new user brings something fresh to the app that we can use to get our work done.

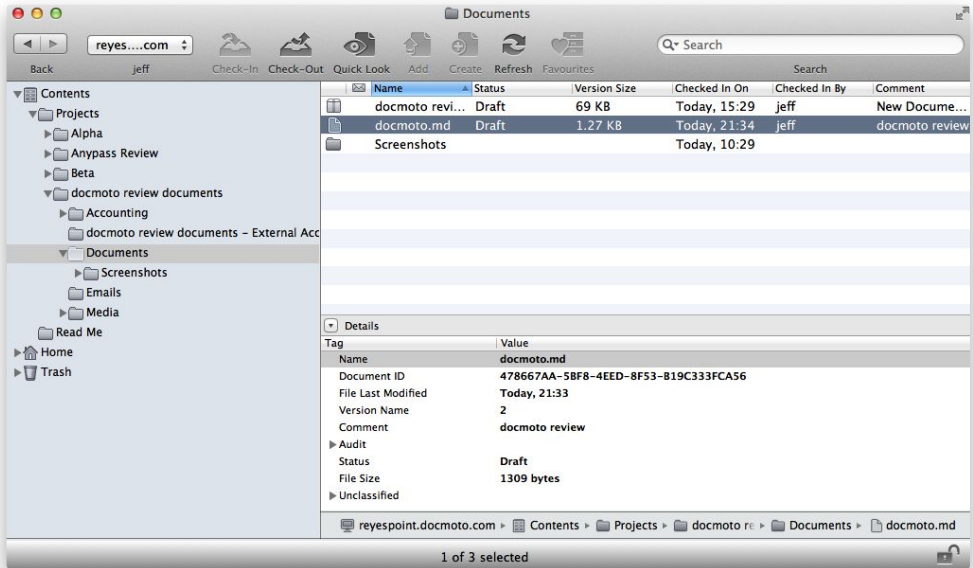
And when you find one you like, add it to your home screen, thus making it more readily available. You can do that by viewing a workflow, tapping on the Settings gear, and selecting Add to Home Screen from the list of options. ■

Network-based document management DocMoto tracks it all



DocMoto is a powerful and sophisticated document management tool that allows you to track everything you do with any type of document.

BY JEFFERY BATTERSBY



If you're in business—any business—the bigger you get, the more likely it is that tracking and managing documents is one of the biggest challenges you face. Enter CHL Software's DocMoto (docmoto.com), a server-based application designed to manage every document your organization touches, from email messages to Office documents. It tracks changes, controls access, maintains revision histories, locks documents for editing, and guarantees that everything you do is centralized, organized, and easy to access.

DOCMOTO'S USER interface behaves just like the Finder, only with an audit trail and excellent tools for managing which files are being edited.

DocMoto is a client-server application that you purchase either as a cloud-based, hosted service or that you can install and host on your own servers. The cloud-based version is hosted by CHL Software and is backed up on

their servers. (Side note: For the purposes of this review I only tested the cloud-based version, but, other than configuring, managing, and backing up your own servers, there is no practical difference in how the versions work.)

FINDER-LIKE INTERFACE

The DocuMoto user environment consists of a Finder-like interface that you use instead of your Mac's Finder for storing and managing your documents. In order to use the application you first have to have access to a DocuMoto server and a user account set up for log in.

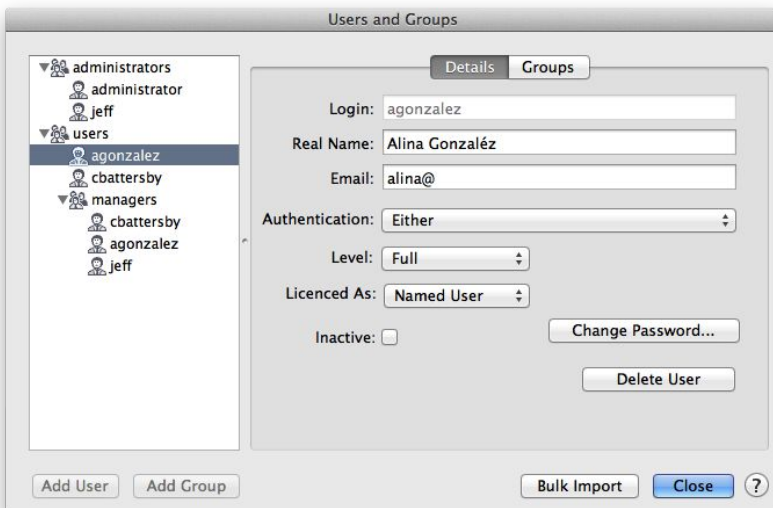
DocuMoto user accounts are a powerful tool you use to manage access to files and folders stored on your DocuMoto server. There are several options for creating users, including DocuMoto's built-in user database and integration with LDAP and Open/Active Directory servers. While user information comes from these databases, you manage user

access using DocuMoto's Users and Groups tool, which works in a similar fashion to most server-based file security tools.

You access files stored in DocuMoto the same way you work on any file in the Finder, with one notable differ-

DOCMOTO USER ACCOUNTS ARE A POWERFUL TOOL YOU USE TO MANAGE ACCESS TO FILES AND FOLDERS STORED ON YOUR DOCMOTO SERVER.

ence: Double click a file in DocuMoto and you will be asked whether you're opening the file for viewing or editing. Choosing view opens the file as a read-only document, choosing edit checks the document out to you and locks it for editing by anyone



DOCMOTO'S SECURITY features make it easy for you to manage which users and groups of users have access to files and folders.

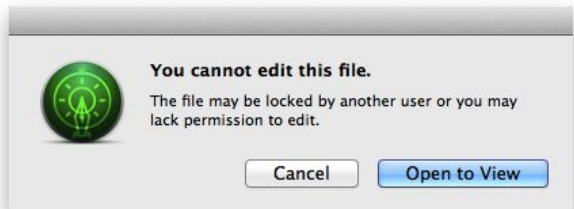
else. Other users can view the document, but no one can make changes until you check the document back in.

There is really no limit to the types of files you can store using DocMoto. CHL Software states that they are yet to come across a file format they can't support. The only possible limitation is on the client side, where editing is dependent on having an application on your Mac that supports a particular file type. Double-clicking a document for editing opens that document in the appropriate application. When you're done with the document, you save it, close it, and check it back in. If you don't have an app capable of editing the document, Apple's Launch Services feature will attempt to guide you to an appropriate app on the App Store.

COMPARE DIFFERENT VERSIONS

When you're done editing a document, you close it and then check it in using the DocMoto app. As you check a document in, you can add tagging information to it, update comments, and provide other useful information that other users will be able to see. DocMoto keeps copies of all previous versions of the document and, if you're using Microsoft Office, allows you to compare different versions of the

documents to see what changes have been made. DocMoto uses Office's Track Changes feature for the comparison, which is why this isn't available with other types of documents. Don't like the current version of a document? You can easily replace with a previous version.



I was also curious about how well DocMoto would handle documents saved using Mavericks' and Yosemite's auto-save feature, and found that the app handled changes to auto-saved documents without issue.

There are a number of ways to interact with documents in DocMoto. You can add new documents by dragging them from the Finder to DocMoto, you can email documents from within the app, or email links to users that allow them to access the documents externally and separate from the DocMoto environment. You can also set notifications on documents and folders so that you're notified whenever a document is modified or a file is added to a folder. In every instance, a detailed document history is maintained on

SOMEONE ELSE editing a file? DocMoto keeps track and won't anyone make changes while someone else is working on a file.

the document and what's been done with it.

DocMoto also has a very useful feature called folder templating, which lets you automatically populate a new folder you create with subfolders and appropriate tags and permissions. This feature is extremely sophisticated and, yet, simple to use. You can create automated naming schemas and, if the way you want folders created changes, you can apply these templates retroactively to all folders previously created using an updated template.

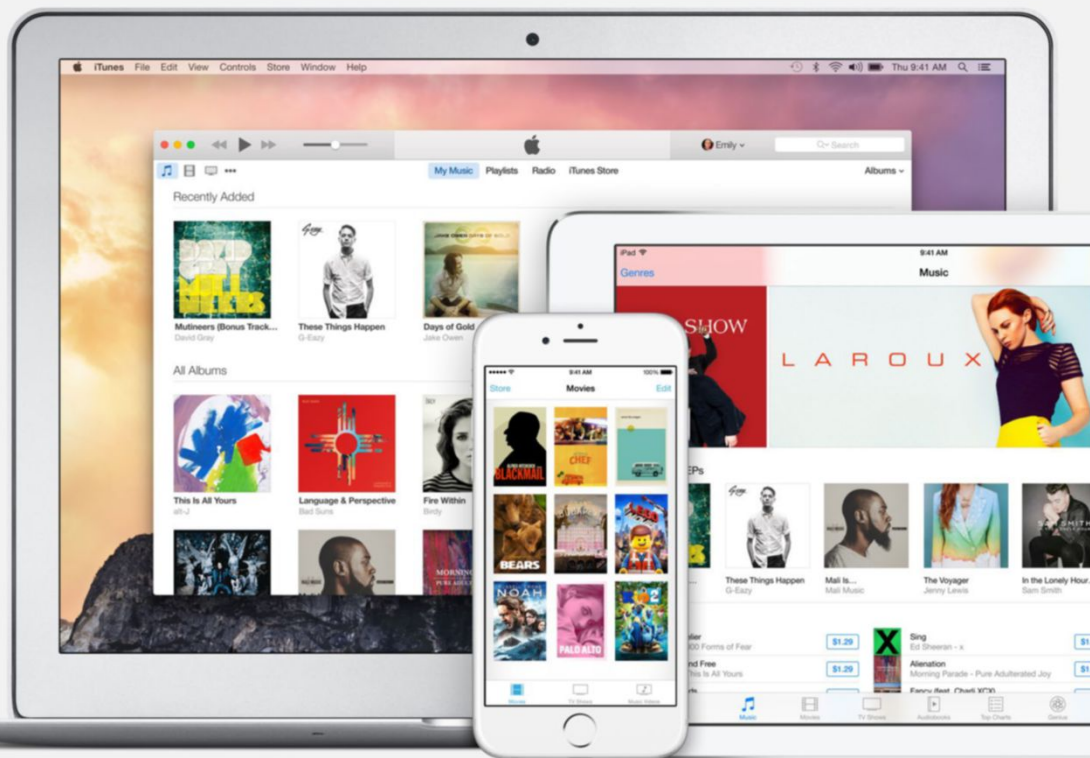
DocMoto also has a companion app for the iPad, which provides all of DocMoto's features—check-in/check-out, document editing, change tracking, etc.—in an interface that works just like the desktop app.

BOTTOM LINE

DocMoto is a powerful and sophisticated document management tool that allows you to track everything you do with any type of document. There is no other document management application I've seen that matches the features, intelligence, or capabilities you'll find in DocMoto. ■

PLAYLIST

Everything You Need to Know About iPods, iTunes, and Mac-Based Entertainment



How to navigate iTunes 12 more efficiently

BY CHRISTOPHER BREEN

As you're likely aware, iTunes 12 brings a lot of changes to Apple's venerable music/everything-else-in-the-world app and, because of these changes, some people find it frustrating. And a subset of those people find it frustrating because they find its unfamiliar interface a little tricky to navigate. My goal in the next few minutes is to show you how to more easily move around the interface.

LET'S START WITH RIPPING CDS.

When you insert a CD into your media drive (presuming you have one), you'll be prompted to import the tracks on it. If you click Yes, iTunes will rip the tracks and import them into your iTunes library.

But if you choose No, how do you later get back to that CD? Just click on the CD icon in the toolbar. When you do you'll see the option for importing the CD in the top-right of the toolbar. If you'd like to import just a track or two, select those tracks, right-click on them, and then choose the option to import them. Just those tracks will be imported.

It's also in this view that you can choose to join tracks together as a single track. In this case, select some tracks and from the Options menu choose Join CD Tracks.

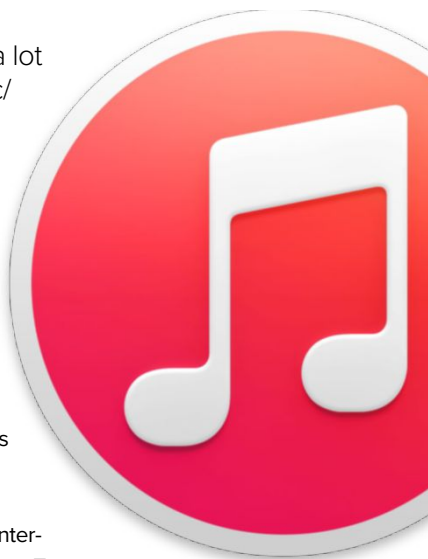
iTunes 12 has a contextual interface. What I mean by that is that the Music,

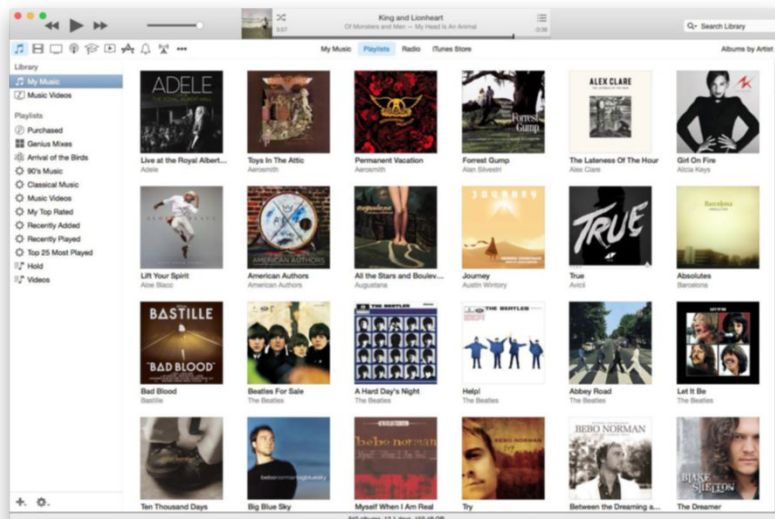
Movies, and TV Shows buttons do different things depending on where you are in the interface. So, here I am in my iTunes Library, and this is my music. If I then click on the iTunes Store button I'm taken to the music section of the store.

When I click on the Movies button, I remain in the store, I'm not taken back to the movies in my library, which is a new behavior in this version of iTunes. In order to get back to your local library, you have to click one of the My links in the toolbar. Then, when you click on one of the media buttons, you'll navigate only to your local media.

If you'd like a shortcut to the iTunes Store, just press Shift-Command-H, which will take you to the store appropriate for the kind of media you're currently exploring.

iTunes 12 also has a new Info window. Similar to Yosemite, the Info window doesn't make it entirely clear





THE iTUNES SIDEBAR

is not entirely gone, but it is now contextual.

what is and isn't a menu or editable field. If you hover over something, it's true nature is revealed, but perhaps you'd rather not bother.

If not, close the window, hold down the Option key, right-click on an item, and choose Get Info. The "old fashioned" Info window appears where I can edit just as I used to.

NOW, ABOUT THE SIDEBAR

If you've been using iTunes for awhile you're used to seeing a sidebar. It's not entirely gone, but it too is now contextual. To view it, you must select one of the Playlists entries. When I do that while viewing Music, the sidebar

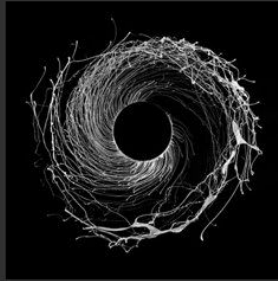
appears along with my playlists.

Within this view I can then change how my media appears from the menu on the right. If I want to see all the tracks in my music library, for example, I just choose Songs. Likewise, I can switch to my movie library and then view a movie list. Same idea with TV shows. One nice thing about this is that the view is sticky. When I move between media types, the last view is maintained.

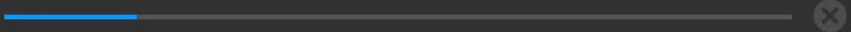
Yes, iTunes 12 is a big change and not everyone is going to like those changes. That said, once you know how to navigate through the interface, those changes aren't nearly so hard to swallow. ■

● Hamlet — 25.7 GB free

Uploading 2 of 9 songs

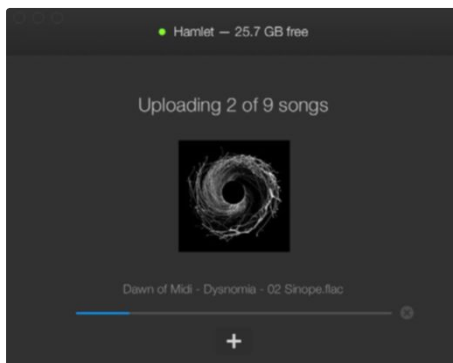
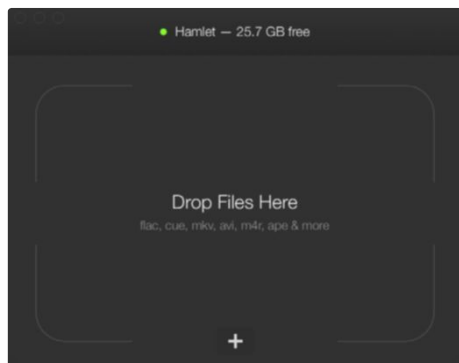


Dawn of Midi - Dynomia - 02 Sinope.flac



Waltr converts and copies media files to your iPhone and iPad

BY KIRK McELHEARN



WALTR IS DRAG-AND-DROP SIMPLE. You just connect your iOS device to your Mac with a cable (left) and then drop files onto Waltr's window to convert them and add them to your iOS device (right), where you can play them in the native Music and Videos apps.

Phones and iPads are limited in the media file formats they can play. You can listen to MP3 and AAC music files, Apple Lossless (ALAC), AIFF and WAV, and you can watch MP4 and M4V video files. But you can't play FLAC or MKV, APE, or AVI. Plenty of third-party apps will let you play these files, but first you have to manually sync your files, either using the file sharing feature (go.macworld.com/isharing) in iTunes, or over a network.

The \$30 Mac app Waltr (softorino.com/waltr) takes a different approach. Relieving you of the hassle of converting files, Waltr does it for you, and copies the files to your iOS devices. Drag files onto Waltr's window, and it will convert and copy files in most any media format. There are no settings and no preferences, just a window onto which you drag items.

And when Waltr copies the files, you don't need to use a third-party app to play them—you can access

them from Apple's Music and Videos apps, just as you do with files you've synced from iTunes or downloaded from the iTunes Store. (Developer Softorino says that Waltr supports video files in MKV, AVI, MP4, and audio formats of "CUE, FLAC, APE, ALAC, OGG, AAC, AIFF, WAV & more.")

The way this works is quite clever. Waltr's developers figured out a way to copy files directly to the media folders on iOS devices, so the Music and Videos apps can

see them. From there, since they have been converted to iOS-compatible formats, you can play them.

For example, if you want to copy a FLAC file, drag it onto Waltr's window, and the app creates an ALAC copy—since conversion to Apple Lossless retains the original quality—and copies it. It can even copy high-resolution audio files, but the iOS device is still limited to the bit depth and sample rate that it can play.

If you want to put an MKV file on your iPad, Waltr converts it to an MV4 file, which, in most cases, is essentially the same as the MKV file, just with a different wrapper. While Waltr claims it can convert any video file in compatible formats, it does have issues with some AVI files. The developers told me that they're updating the app to work with older AVI files, which use certain codecs that currently don't work with the app.

FASTER THAN A FULL SYNC

There are many advantages to using Waltr. Not only can you add non-iOS compatible files to an iOS device, but it's a great way to quickly copy an album or a video to your device without doing a full sync. I've often found that when I want to add an album to my iPhone before I go out for a walk, iTunes hiccups and takes 15 minutes to sync. You can also copy items to your iOS device using Waltr

I'D LOVE TO SEE WALTR GO FURTHER, AND CONVERT FILES AND ADD THEM TO YOUR ITUNES LIBRARY, IF YOU WANT.

on a different Mac from the one you use to sync the device, so if you sync your iPhone with iTunes at home, and you want to add an album from your Mac at work, you can.

Your iOS device needs to be connected to the computer—you can't do this with Wi-Fi syncing. And the next time you sync the device, iTunes will delete any content you've added with Waltr, because it's not in your iTunes library. This is no fault of Waltr; it's simply the way iTunes and iOS interact. There is no way for a third-party app to add files and have them remain on a device after syncing.

I'd love to see Waltr go further, and convert files and add them to your iTunes library, if you want. I use different apps to convert audio and video files, and it can get a bit complicated, especially for people who don't do this often. This would make the app a one-stop shop for most people's audio and video file conversion needs. But Waltr is an excellent tool to get media files onto your iOS device quickly, and to no longer worry about unsupported formats. ■



**“ SURE,
AT FIRST I WAS A LITTLE TAKEN ABACK
BY THE WHOLE PEEING STANDING UP THING.
BUT I TAUGHT HIM TO THROW A STICK
AND NOW HANGING OUT WITH HIM
IS THE BEST PART OF MY DAY.”**

**— EINSTEIN
adopted 12-09-10**

**A PERSON
IS THE BEST
THING TO HAPPEN
TO A SHELTER PET**

 **adopt**

theshelterpetproject.org





Ask the iTunes Guy

Joining tracks, iOS and Apple Lossless, missing genres and artist sorting

BY KIRK McELHEARN

Q&A

Interesting questions hit the inbox recently. In this column I will show a couple of ways to have two songs always play together in shuffle mode; look at a question regarding high-resolution files, Apple Lossless, and iOS devices; field two questions about adding information to the Lyrics tag of audiobooks files; look at a bug in iTunes 12; discuss an issue where a reader couldn't import AAC files into iTunes; explain how to combine a pre-ordered single with an album; and how to sort artists by their last name. Whew!

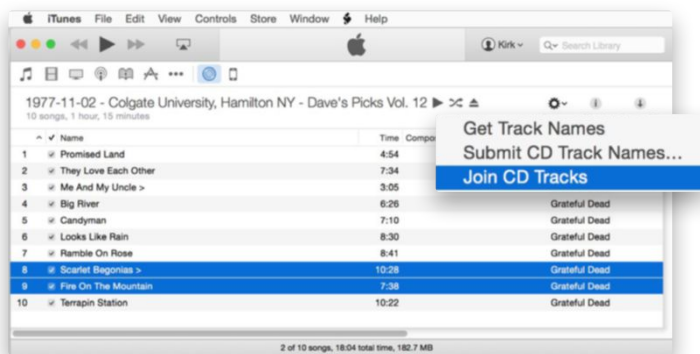
Q: When I play music in shuffle mode, how do I keep two songs together so they always play back to back?

A: Unfortunately, you can't do this when playing the tracks in iTunes. But there are two ways you can manipulate your music files to get this to work.

The first thing you can do is join the tracks when you rip a CD. To proceed, insert a CD in your optical drive (most likely an external drive, since modern Macs don't have internal drives). View the CD in iTunes before importing it, select the two (or more) tracks you want to join, click Options, and choose Join CD Tracks.

If you've already ripped or downloaded the tracks you can use Doug Adams' \$5 Join Together (go.macworld.com/join). While many people use it to join audiobooks into single, long tracks, there's no reason why you can't use this app to join two or more songs.

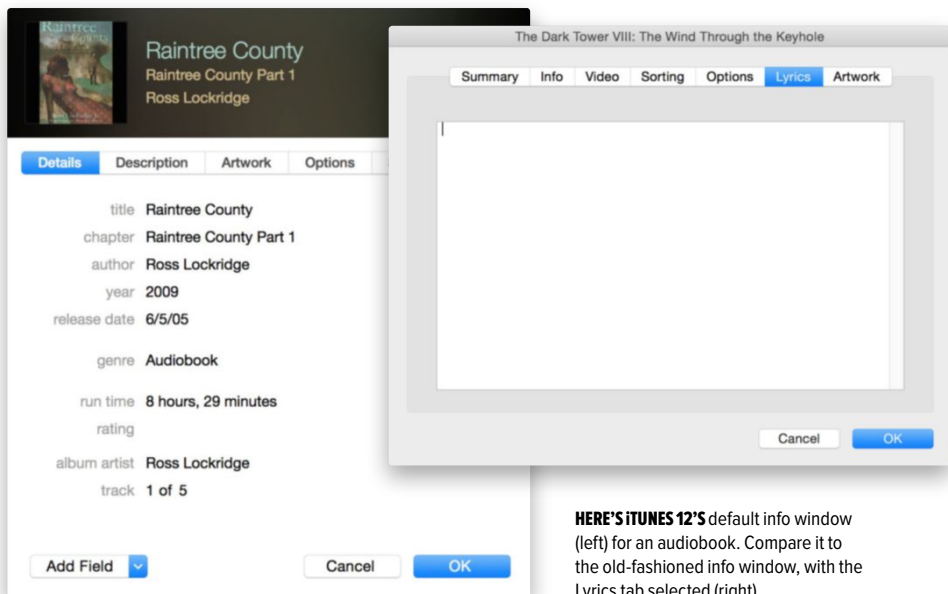
In both cases, you should rename the joined tracks to show the names of both songs. That way you can



find them when you search for either of the songs. In the screenshot above, after I've ripped the CD, I'll rename the joined track *Scarlet Begonias* → *Fire on the Mountain*.

Q: I have a lot of audiobooks in my iTunes library, and I like to add information about them in the Lyrics tab of the Info window. But in iTunes 12, there is no Lyrics tab for audiobooks. Is there any way I can add information to audiobooks as I did before?

YOU CAN JOIN two or more tracks in iTunes when you rip a CD.



HERE'S ITUNES 12'S default info window (left) for an audiobook. Compare it to the old-fashioned info window, with the Lyrics tab selected (right).

A: You're right, when you select a file and press Command-I to display the Info window, you don't see the Lyrics tab in iTunes 12.

But there is a way to access this field. Select a file, press and hold the Option key, right-click on the file, and then choose Get Info. You'll see the old Info window, where you can add and access lyrics for any type of file.

Note that the Lyrics tab is dimmed for audiobooks that I've purchased from Audible, but not for audiobooks bought from the iTunes Store.

Q: I purchased some high-resolution music files from an online vendor in FLAC format (96

kHz/24 bits). I converted them to Apple Lossless, imported them into iTunes, and they play fine in iTunes. I've created AAC versions for my iPhone, where they also play perfectly. But on my iPad, I want only lossless files and iTunes won't sync the Apple Lossless files I created, saying that they're not compatible with the iPad. How come? I thought it could play all Apple Lossless files?

A: As you point out, your Mac can play high-resolution files (go.mac-world.com/highres) if you use USB or Toslink digital optical audio, and connect the computer to a DAC

(digital-analog converter). As for iOS devices, they will play Apple Lossless files as long as they're 16-bit. Given that your files won't sync to your iPad, it's clear that when converting them from FLAC to Apple Lossless you kept their original sample and bit rates, which aren't compatible with the iPad. Since you want to keep the 24-bit files in iTunes, you'll need to have another set of files to put on the iPad.

iTunes can convert files on the fly when syncing the tracks to your iPad. This reduces both the bit depth from 24 to 16 bit, and the sample rate from 96 kHz to 44.1 kHz, but the resulting files are in the AAC format. Regrettably, iTunes can't convert 24-bit Apple Lossless files to 16-bit Apple Lossless files while syncing.

Your only solution—and it gets a bit complicated—is to convert the 24-bit high-resolution lossless files to 16-bit lossless files and then sync those to your iPad. You'll end up with two copies of each file in your iTunes library, though, and given the size of lossless files, this could be problematic. You could use iTunes to convert the files, by changing the Import Settings, available from the General preferences, to Apple Lossless. But I would do this outside of iTunes, using the free XLD (go.macworld.com/freexld). Once you've converted the files, you can drag them into a new playlist in iTunes. You can then edit their names (or some other tag, to

HOWEVER, BECAUSE OF A GLITCH IN iTUNES, THE SCRIPT CAN'T READ THE LYRICS TAG OF AUDIOBOOK FILES.

make sure you know which file is which) and then sync those Apple Lossless files to your iPad.

Q: Is there any way to export all the lyrics from tracks in your iTunes library?

A: This was a follow-up to the question about adding text to the Lyrics tag for audiobooks. iTunes can't do this, but once again, Doug Adams comes to the rescue with an AppleScript, Lyrics to TextEdit (go.macworld.com/lyrics). However, because of a glitch in iTunes, the script can't read the Lyrics tag of audiobook files.

To use the script with music files, select one or more files in iTunes and then double-click this script to run it in AppleScript Editor. The script will copy the lyrics from the selected files (if they do, indeed, contain lyrics) and then open a new text document for each track. Each file is named with the name of the song (or audiobook), and contains all the contents of that track's Lyrics tag.

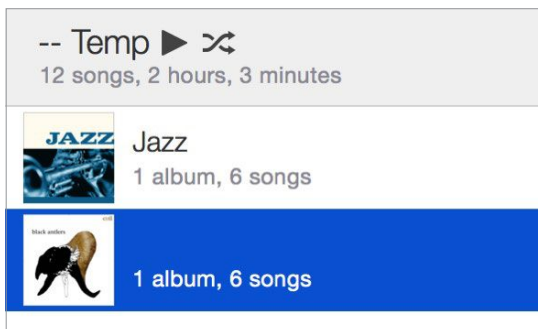
If you want to use this with audiobooks, create a new playlist and drag

all your audiobooks to it. Select all the files, and then press Command-I. Click the Options tab, change the media kind to *Music*, and click OK. You can now run the script to get the lyrics, as the files are now music files. After you've extracted the text from the Lyrics tab, select all the files and change them back to Audio-books from the Media Kind menu.

Q: I've noticed a new behavior with editing the Genre tag in iTunes 12. Previously, when I wanted to remove a Genre tag and not reassign it (keep it blank), deleting the genre tag from the Info window worked just fine—there was no genre assigned. Now, when I delete the genre, the track has a blank genre. Is there any way to fix this?

A: I contacted the reader and he explained that he likes to have some of his music with no assigned genre tag so that he can use smart playlists to find certain tracks that do have assigned genres. I followed the steps he'd taken and, indeed, the genres were not empty in tracks I changed. When deleting the Genre tag, iTunes replaced it with eight spaces, rather than nothing. I explain this more in an article on my website (go.macworld.com/mcelhearn).

As near as I can tell, this is a bug. There are a couple of work arounds. If



you edit each track individually, you can correctly delete the Genre tag. Or, you can delete it in the old Info window. To do that, hold down the Option key, right-click the track, and select Get Info for multiple tracks. The old Info window appears. Now delete the tag. Or, you can use an AppleScript (go.macworld.com/ascript) that Doug Adams whipped up, which deletes the Genre tag correctly.

Q: After spending 12 hours converting the MP3 files on my PC to the AAC format, I discovered that iTunes doesn't accept AAC files converted by other software. It refused to add my files. How can I convert my existing MP3 files?

A: iTunes does not refuse AAC files converted with other software. The problem here was that the user chose a different type of AAC file; one with the .aac extension. He sent

ITUNES 12 does not delete the Genre tag when you tell it to, and creates a blank genre.


me a file and I found that he had converted them to ADTS (Audio Data Transport Stream) files (see go.macworld.com/adts), which is a format used for streaming AAC audio files. The user went back and selected M4A as the format, and all worked well.

Two things to note here. First, AAC files are not restricted to use as music files. In this case, a sort of hybrid format is used for streaming over Internet radio stations. Second, if you're not aware of it, the .m4a extension may seem surprising, especially if you know that the format you want is AAC. Audio files have an alphabet soup of formats and file extensions, and it can be quite confusing sometimes.

Q: I frequently buy singles that are available before complete albums are released on iTunes. When the album is released, the

single I bought earlier is separate from the complete album. For instance, Maroon 5's album V has 14 songs. I downloaded the single "Maps" before the full album was released. After I purchased the full album, the first song, "Maps," was not downloaded, and, in iTunes, "Maps" is tagged as a different album called Maps-Single rather than under the album V, which now has only 13 songs. How can I change the single's tagging so that it appears with the full album?

A: It is common that, when you pre-order an album, you get to download a single. As you say, the two are tagged differently: one with the single's name as the album, the other with the album name. I don't understand why this is the case— if you're pre-ordering the album, it should be tagged correctly. Even if you do buy only the single, why

	1	✓ Beyond Here Lies Nothin'	Beyond Here Lies Nothin' - Single
	2	✓ Life Is Hard	Together Through Life
	3	✓ My Wife's Home Town	Together Through Life
	4	✓ If You Ever Go to Houston	Together Through Life
	5	✓ Forgetful Heart	Together Through Life
	6	✓ Jolene	Together Through Life
	7	✓ This Dream of You	Together Through Life
	8	✓ Shake Shake Mama	Together Through Life
	9	✓ I Feel a Change Comin' On	Together Through Life
	10	✓ It's All Good	Together Through Life
	11	✓ Lay, Lady, Lay (Studio Rehearsal)	Together Through Life

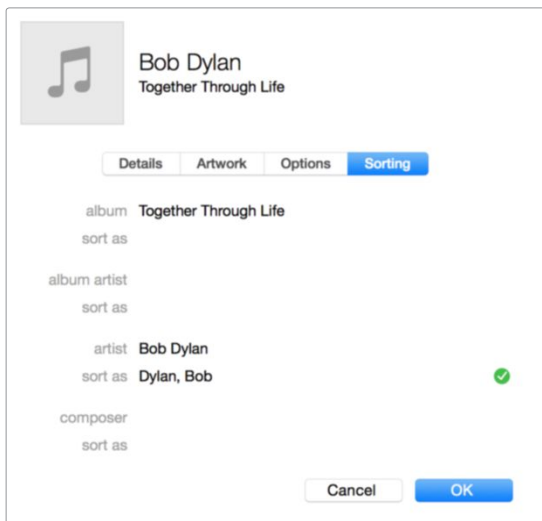
HERE IS A single, and its album, delivered by iTunes with different Album tags.

should the album tag be different?

In any case, here's what you need to do. Put all the tracks—single and album—in a playlist. Select the single and then press Command-I. Note the track number of the single in the album; for example, in the screenshot on page 128, it's the first track. Make sure to change the tag for the track number as well as the total number of tracks. So, in the example, I change the single to Track 1 of 11. Then change the album tag of the single to match the album name. Click OK to save these changes. The tracks may not sort in the playlist, but they'll be in the correct order.

However, if you do want to have both the single and the album, check your Purchased page on the iTunes Store (look under Quick Links on the main page of any section of the store). On the Purchased page, click All at the top of the library, and then Songs. Find the artist in the left-hand column and you'll see all the songs by that artist. This should list all the songs the album contains as well as the single. You can just download the missing song to fill out the album and keep the single in your library if you wish.

Q: In iTunes 12 I've noticed that when I rename an artist, such as changing Selena Gomez to Gomez Selena, the last name



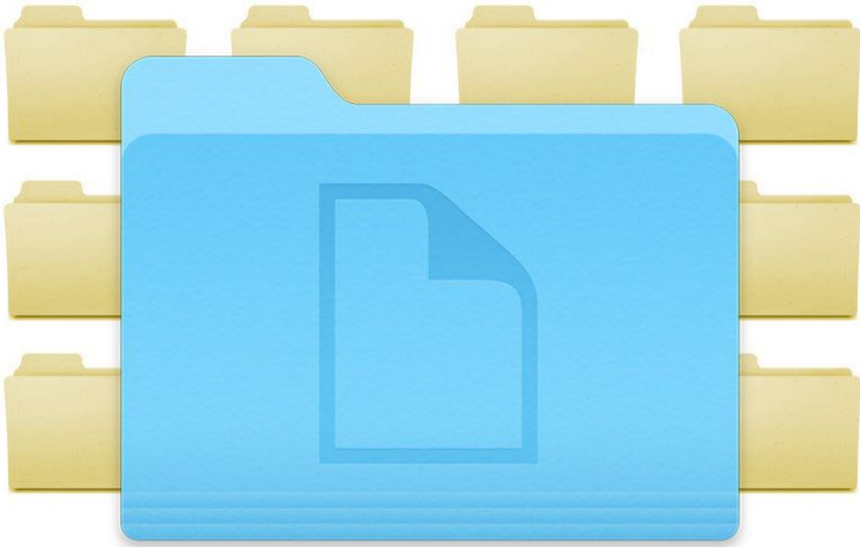
doesn't sort alphabetically. Gomez sorts as S and not G. Any ideas on how to fix this?

A: Make sure to change the Sort Artist tag. Select one or more tracks, press Command-I, and then click Sorting. You'll see the artist name and a field labeled Sort As. Make sure to either delete this latter field or enter the name as you want it to sort.

So, in this case, if I want the music to sort as Dylan, Bob, I enter that in the Sort As field.

Have questions of your own for the iTunes Guy? Send them along for his consideration to itunesguy@macworld.com. ■

TO HAVE TRACKS sort by the artist's last name, you need to tell iTunes to do this.



Mac 911

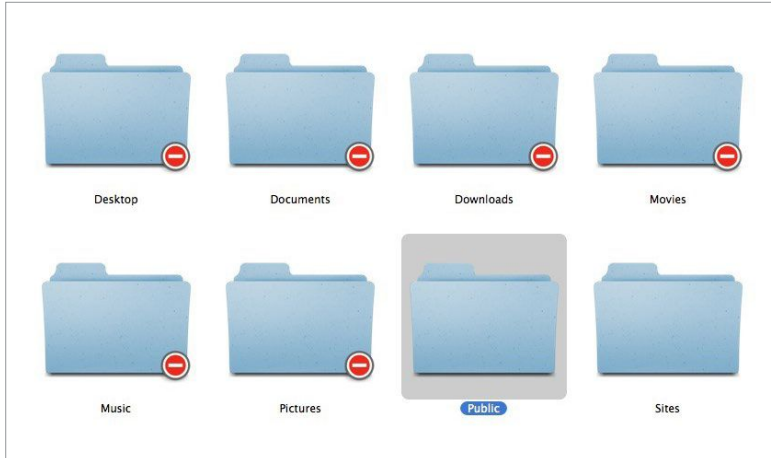
Solutions to your most vexing Mac problems.

BY CHRISTOPHER BREEN

How to share files between OS X user accounts

In a recent column about making the most of Migration Assistant ([go. macworld.com/migration](http://go.macworld.com/migration)) I made the off-hand remark that it's no big deal to move files from one account on your Mac to another. This caused concern from at least one commenter who considered the process onerous. Given that moving files between accounts isn't entirely clear to everyone, I thought I'd provide the details now.

We start with the understanding that OS X is designed as a multi-user operating system—one where files stored in one account are not easily accessible in another. For example, if Susie and Chris share a Mac, Susie should not be able to see the contents of Chris' Documents



PLACE ITEMS that you want to share with others in your Public folder.

folder while working in her account and vice versa. If Susie tries, she'll see that Chris' Documents folder bears a red "no trespassing" icon indicating that her way is barred.

There are ways around this. You could, for example, change permissions on another account's folders if you know that account's administrator password. Or you could log in as root, which grants you permission to everything on the drive. Each of these techniques, however, is considered sneaky by the best sorts of people.

Fortunately, the Mac OS makes accommodations for those people who wish to share files with others using the same computer. One of them is the Public folder found in each user's account. Unlike the Desktop, Documents, Downloads, Movies, Music, and Pictures folders, this one bears no red icon. It's where

you place files that you want to share with others. When someone in another account wants whatever it is that you've placed in the Public folder, all they need do is open it and copy its contents to their account.

You can also push files to other users by dragging files to the Drop Box folder within each user's Public folder. This is a "one-way" folder in that you can copy files to another account's Drop Box, but only the person logged into that account can see the folder's contents.

If, on the other hand, you want to make files available to anyone using the computer there are a couple of ways to do that. One is to drag files to another drive or partition attached to the Mac. Another is to use the Shared folder inside the Mac's Users folder (found at the root level of the startup drive).

The Shared folder's permissions are Read & Write, across the board. It was designed for exactly this kind of thing—easily moving files between accounts. I use the technique often enough that I've created an alias of the Shared folder and placed it in the Finder sidebar, making it easy for me to move files between accounts.

What's the best way to maintain media for eternity and beyond?

Q: I'm in the process of cleaning out my iMac—removing data that's not current and apps that I don't use or won't work under Yosemite. Because I've done this before and been stuck with unreadable media, what's the best way of archiving digital material so that it can most likely be retrieved in the future if desired?

Kirk Edgar

A: Given that my prophetic powers are no more honed than the average guy who writes on the Internet, I can't, with absolute certainty, tell you which formats will and won't survive. But I can offer some guidelines.

For archived files, stick with popular formats You need spend only five minutes with a dedicated AppleWorks user to get a hint of how painful it can be to lose files because

their format has been relegated to the dust heap. Much as you may prefer working with App X, if it's a not-terribly-popular app and it saves files in a proprietary format, you could be looking at trouble down the road. At the very least, when saving files and presented with the option to make an additional copy in a popular format, seize it. This may not result in a file as editable as you may like, but at least you have some kind of copy that you can work with at a later date.

I'm not suggesting that you delete any original files. They still work and may continue to. I'm simply saying that having a copy in a different (and popular) format can't hurt.

Keep an eye peeled Again, sorry to twist the knife, but there were plenty of signs that ClarisWorks/AppleWorks file formats were going the way of the dodo long before they vanished entirely. Apple stopped updating AppleWorks, which should have hinted that it was time to move on. In those days you could still convert many (though not all) ClarisWorks and AppleWorks files to common file formats with relative ease, using tools such as DataViz's MacLinkPlus Deluxe (go.macworld.com/viz).

Yet even with these hints, many AppleWorks users stubbornly continued to create files that were soon to be obsolete. By the time these folks accepted that their beloved applica-

tion suite was well and truly dead, it became that much harder to convert their files, as the necessary tools became unavailable or incompatible with the modern Mac OS. Don't be that person.

Trust the government (and others) When considering the best formats to use for your media and files, take a look at the formats adopted by large corporations and governments. For example, the vast majority of online forms are saved as PDF files. While Microsoft may change the way Word files are saved (and heaven knows we've seen changes in Apple's iWork formats), PDF looks like the solid bet for preserving formatted text. And plain text has been around forever and I can't image that it won't be for years to come. It's not formatted, but at least it's readable.

Media matters In regard to media, you want to look for formats that are both popular as well as unmucked-with.

For example, when archiving images I might choose to keep both the original raw files as well as JPEG copies. With the former I'll hopefully continue to have access to all the data the original image contained. With the latter—because it's such a popular format—there's every chance that I'll be able to view that image decades from now. (If I wanted to be doubly careful I might

A screenshot of a web browser displaying the 2014 U.S. Individual Income Tax Return (Form 1040) from the IRS website. The browser's address bar shows 'www.irs.gov/pub/irs-pdf/f1040.pdf'. The form itself is a complex document with various sections for personal information, filing status, exemptions, and income. It includes fields for name, address, and social security number, as well as checkboxes for different filing statuses like 'Single' or 'Married filing jointly'. The form is presented in a clear, structured layout with distinct sections and labels.

make an uncompressed TIFF copy of important images.)

For audio files you can look at AIFF and WAV, which are both popular and uncompressed. MP3 isn't going anywhere anytime soon, but it is a compressed format. Apple Lossless sounds great, but it's a format largely restricted to Apple devices.

When we talk about video, we're thinking of your personal movies rather than commercial releases. (Don't worry, even into the 24th century, Disney will find a way to sell our bunker-dwelling descendants cave-painted copies of *The Lion King*.)

Check Google for the most common movie file types and you'll find the first hit lists Windows Media, QuickTime, Real Media, MPEG, DIVX, and Flash formats. That may have been a lovely list when it was first put together, but if you know anything

WHEN THE government commits to a file format, it's a hint you should too.

about movie files you're chuckling right about now. Some of these formats are all but dead and others will be soon enough.

At this particular point in time MPEG-4 (particularly the H.264 variant) looks like the best bet as it's widely used for streamed and downloaded video as well as for Blu-ray discs. It's typically a lossy format, but high bit rate files can look amazing.

Fortunately, you needn't make a decision right now. Keep your original files in the format you prefer—QuickTime, for example. As you see standards change, consider creating copies in the flavor of the decade.

You can't preserve what's not there You'll want more than one of these to back up your precious data.

Something else to consider is how you back up your data. It's all well and good to create copies of it in forms likely to work on into the next several decades, but if the device or service you've archived it to gives up the ghost a year or two from now, then where are you? It's for this reason that you should have redundant backups of the files and media most precious to you. For now, that means hard drives and online storage. (And hey, what's wrong with printing your images and text?) If you're really serious about

this, I urge you to read Rob Griffiths' The Paranoid Person's Guide to a Complete Mac Backup (go.macworld.com/paranoid). Implementing his entire workflow is overkill for... well, just about anybody. But it offers

PRECIOUS THOUGH YOU MAY BELIEVE YOUR EVERY IMAGE, MOVIE, AND FILE, THERE'S A GOOD CHANCE THAT SOME OF THEM NEED NOT BE PRESERVED.

some great backup strategies.

At the risk of unearthing a painful personal memory, a couple of years ago my child and I stood before my vinyl collection while I proclaimed, with a magnanimous sweep of my arm, "Some day this will all be yours!"

To which my spawn replied, "I will bury them with you."

And that about sums it up. Precious though you may believe your every image, movie, and file, there's a good chance that some of them need not be preserved. Culling your stuff now (rather than leaving it to others) will make managing your remaining data easier.

What's the best media for long-term storage?

Q: What is the best physical media to store archives on?

Karen Bauer

A: If we allow history to be our guide, I'd suggest stone tablets—able to withstand just about any natural catastrophe you throw at them, but murder when it comes to editing.

Silliness aside, there is a small lesson here. For certain kinds of media it's helpful to have them in the most readable form possible. Printing text and images eliminates the translation issue—where a format has gone the way of the dodo and you don't have the technology to read it. But this kind of storage is then subject to degradation from the elements—one good flood and your media is soggy toast. Plus, putting it in a purely physical form may require a lot of physical space to store it.

The truth is, apart from a purely physical representation of that media, we don't have a perfect solution. Tape was once the storage medium of choice for those who needed loads of capacity without a lot of fuss or bother. Turns out magnetic media of all kinds (floppy disks, for example) isn't terribly robust and degrades over time.

Later, we were assured that CD and DVD media was the answer. The stuff was supposed to last for a century. Not so much. A variety of conditions can cause this media to break down or become unreadable. (Or it may have been flawed from the get-go.)

And then we have the hard drive—spinning magnetic media. Should something cause a drive to stop spinning or the media to get scrambled, whatever was stored on the drive could be lost (or, at least, difficult to recover). And solid state storage has hardly proven to be the forever media we seek—it too can lose data or simply stop working.

Until that perfect solution appears we'll have to muddle along as best we can. One path to successful muddling is creating redundant copies of your most important media. For instance, if you've just finished editing your video masterpiece, it makes sense to place copies of the raw data and edited version on a couple of hard drives you own (and store them in different locations), burn a couple of copies to Blu-ray media, and upload those same couple of copies to two or three different online storage services. I can't imagine how you could more thoroughly cover your bets.

But you can't stop there. You don't want to be the person who stored their media on floppy disks, later moved it to Zip disks, and then figured they were done. You have to pay attention and be ready to take advantage of new storage and archival options as they appear.



THIS IS NOT the miracle media you were looking for.

Exploring the many miracles of Image Capture

Q: When you talked about how to delete images from your iPhone (go.macworld.com/delete) you said something about an app called Image Capture (and mentioned that hardly anyone uses it). I must be one of those people as I've never touched it. What does it do?

Colin Pritchard

A: Apple's pretty good about giving apps and services descriptive names. Image Capture is no exception. It pulls still images and movies from compatible connected devices such as scanners, iOS devices, cameras, and removable media. And it's included with every Mac. You'll find it in the Applications folder. In the screenshot

below you can see that connected devices appear in the Devices pane. In this case you find my connected scanner, an iPad Air, an SD card reader, and the hard drive of a camcorder connected via USB. In the main portion of the window you find a lot of information about the images a device holds. But Image Capture can do more. Such as:

Scan documents Although your scanner likely ships with some kind of software, you may not need it as Image Capture can take care of basic scanning chores. Connect a scanner to your Mac, fire up Image Capture, select the scanner in the Devices pane, and click the Show Details button at the bottom of the window to see just what Image Capture can do with your scans. You may be surprised by the number of options you find.

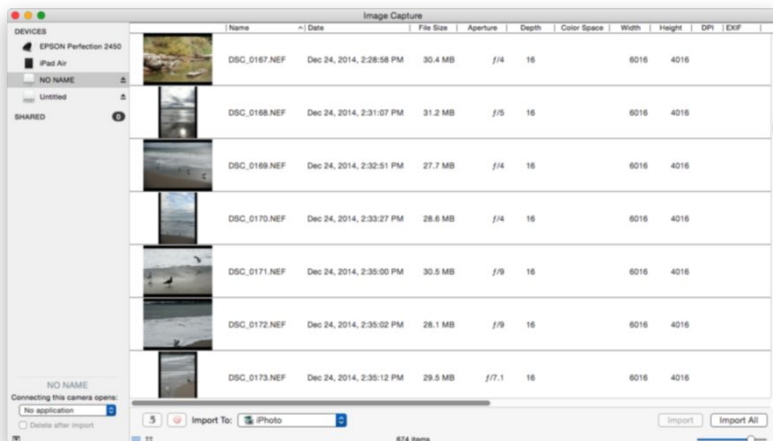
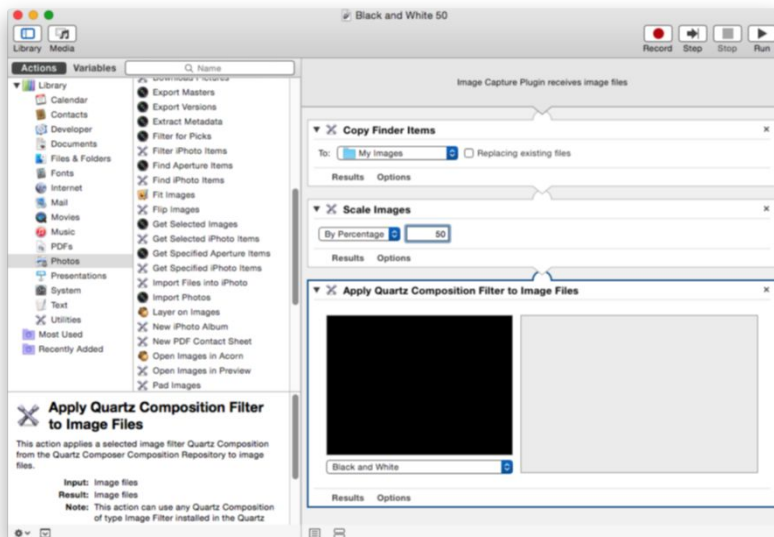


IMAGE CAPTURE pulls still images and movies from compatible connected devices such as scanners, iOS devices, and cameras.



AUTOMATOR AND
Image Capture
provide a way to
process images as
you import them.

Assign a default photo app

Normally, when you plug your camera or iOS device into your Mac, iPhoto launches. If you'd like a different app to launch—Adobe Lightroom, for example—you can make that happen in Image Capture. Just click on the small triangle at the bottom-left of the Image Capture window to expose the Application pop-up menu. Now select a connected device and, from that pop-up menu, choose Other. In the sheet that appears navigate to the app you'd like to open when you connect the selected device.

Automatically import images

Hidden in the depths of your Mac's System folder is an app called AutoImporter (the path to it is /

System/Library/Image Capture/Support/Image Capture). If you select a device and, from the Applications pop-up menu, choose AutoImporter, any time you insert that device, its images will be automatically imported into an AutoImport folder within your user folder's Pictures folder. If you're looking for an easy way to pull all the images off a camera or storage card, this is it.

Create a contact sheet Select some images and, from the Import To pop-up menu, choose MakePDF. Click the Import button and a MakePDF app launches and creates a contact sheet from the selected images. You're welcome to change the size of the thumbnails by selecting a different size from MakePDF's

Layout menu. When you save the file it will be saved as a PDF.

Build a web page As you clicked on that pop-up menu you may have noticed a Build Web Page option. When you choose this option, select some images, and then click Import, the images will appear as thumbnails on a web page that opens in your Mac's default browser. Click on an image and you'll see a larger version of it. Click the larger image to return to the thumbnails page.

Process your images with

Automator Apple's automation app, Automator, includes an Image Cap-

ture Plugin workflow. With it you can build a workflow that, for example, resizes your images and converts them to black and white. When you create and save one of these workflows it appears in the Import To pop-up menu. Select some images, choose the workflow, click Import, and the actions within your workflow will be executed.

In short, Image Capture packs a load of utility. If you haven't taken time to explore it, you should.

Have a question of your own? Drop a line to Mac911 (mac911@macworld.com).

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